



Annual Report / 2018–19



Acknowledgements



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Cover Images

- 1 Harvest time in the Victorian Mallee.
- 2 Working with our diverse community gives us a chance to showcase some remarkable native animals.
- 3 Involving local children in our work gives everyone a chance to explore the amazing Mallee region.
- 4 Fishing is one of the many ways local families stay connected to Country.

The Mallee Catchment Management Authority (CMA) acknowledges and respects Traditional Owners, Aboriginal communities and organisations. We recognise the diversity of their cultures and the deep connections they have with Victoria's land and waters.

We value partnerships with them for the health of people and country. The Mallee CMA Board, management and staff pay their respects to Elders past and present, and recognise the primacy of Traditional Owners' obligations, rights and responsibilities to use and care for their traditional lands and waters.

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Declaration in Report of Operations

Responsible Body's declaration

In accordance with the *Financial Management Act 1994* (Vic), I am pleased to present the Mallee Catchment Management Authority's Annual Report for the year ending 30 June 2019.



Sharon Peart

Board Chair

Mallee Catchment Management Authority

28 August 2019

Part 1

Year in Review

Chair's Report

The work delivered by the Mallee Catchment Management Authority (CMA) during 2018-19 demonstrates the organisation's enduring commitment to protecting and enhancing our region's natural, cultural and productive landscapes by working in close partnership with our communities and key regional stakeholders.

The Mallee CMA's Annual Report 2018-19 documents our progress toward delivering Victorian Government objectives and priorities, within the context of the *Catchment and Land Protection Act 1994*, the *Water Act 1989*, Ministerial expectations, and policy directions set out in *Water for Victoria* and *Our Catchments, Our Communities*.

I am pleased to report that in delivering our work, we have continued to ensure our community has remained central to the planning, delivery and evaluation of natural resource management (NRM) outcomes in the Victorian Mallee. We have worked in partnership with Traditional Owners, community members, partner agencies and key stakeholders such as Landcare and Friends of groups, with all involved focused on protecting and enhancing the region's land, water and biodiversity.

Highlights of our work are noted below and categorised according to the 2018-19 Ministerial Expectations for the organisation:

Climate Change

The Mallee CMA has continued to plan for and respond to a changing climate by ensuring the ongoing delivery of regional programs incorporates priority landscapes and associated interventions established by the Mallee Natural Resource Management Plan for Climate Change (2016). In 2018-19 this included a joint initiative across Victorian CMAs to engage with Traditional Owners to identify opportunities for carbon farming and the economic benefits associated credits may present.

Waterway and Catchment Health

Highlights of our work in improving waterway and catchment health during 2018-19 included delivering environmental water to 48 priority sites, establishing 100ha of native vegetation, installing 39 km of fencing/bollards, and undertaking 37 km of road/track rationalisation and repair works. In addition to this, we retained our focus on invasive plant and animal control, delivering 3,310ha of weed control (primarily woody weeds) and 8,642ha of pest animal control (rabbits and feral pigs) throughout the year.

Water for Agriculture

The Mallee CMA has continued to support a productive and profitable irrigation sector by delivering irrigation and salinity management actions identified as a priority for the Mallee under *Water for Victoria* (2016). Key actions included working collaboratively with the Department of Environment, Land, Water and Planning (DELWP) and Lower Murray Water to address Action 4.8 Salinity Management in the Mallee; delivering against priorities established by the Mallee's Salinity Investment Plan to offset the salinity impact of new irrigation development between Nyah and the South Australian border; and renewal of the Victorian Mallee Irrigation Region Land and Water Management Plan.

Community engagement and partnerships

We have worked hard throughout the year to meaningfully involve our community in NRM, with 2018-19 seeing the delivery of a significant number of both targeted and whole of community NRM education activities. Highlights included the successful delivery of 109 field days (2,125 participants), 37 workshops (743 participants),

22 training events (127 participants), and 379 forums/meetings (2,783). Work such as this helps ensure we are supporting a well-informed community with the skills and confidence to identify, direct and implement change.

Recognising and supporting Aboriginal cultural values and economic inclusion in the water sector

In recognition of the important role Aboriginal people play in caring for Country, we have partnered with Traditional Owners throughout the year to conduct on-Country cultural heritage assessments and Aboriginal Waterway Assessments. These assessments have provided formal ways of recognising Aboriginal cultural values and helped deliver economic inclusion in the water sector, but this work has also been crucial to continuing to develop strong relationships with the region's First People and opportunities for their meaningful involvement in NRM.

Recognising recreational values

Recreational values have been celebrated across the region, but especially at Merbein Common, which is the Mallee CMA's flagship waterway project being delivered as part of the Victorian Government's record \$222 million investment into waterway and catchment health. Through a strong, community-driven project, on-ground works have been prioritised and delivered to improve opportunities for bushwalking, cycling, canoeing, camping and recreational angling.

Supporting resilient and liveable cities and towns

Throughout 2018-19, we have worked with Victorian Mallee communities to support and enhance the resilient and liveable cities and towns. Our work has involved identifying and, where appropriate, supporting regional responses to emerging threats and opportunities. We have also continued to support our region's land managers to be responsive and effective stewards of our natural, cultural and productive landscapes.

Leadership, diversity and culture

Through the implementation of the Mallee CMA's Diversity and Inclusion Plan, our organisation has continued to demonstrate our commitment to actively building a diverse workforce, while encouraging leadership and culture. Key actions undertaken have included delivering engagement activities in partnership with diverse community groups, ensuring appropriate gender balance on recruitment panels, and encouraging staff participation in events that promote LGBTIQ awareness and inclusion.

Improved performance and demonstrating outcomes

Our commitment to a high level of corporate governance continues to be demonstrated by the ongoing effort invested in retaining ISO 9001:2015 certification for our Quality Management System. In addition to this, 100% of areas identified for improvement by regular internal audits and management reviews have been addressed within scheduled timeframes.

Conclusion

It is with pleasure, I present to you the Mallee CMA's Annual Report 2018-19.



Sharon Peart
Board Chair
Mallee Catchment Management Authority

28 August 2019

Vision, Mission, Values

Our Vision

"Informed and active communities balancing the use of resources to generate wealth, with the protection and enhancement of our natural and cultural landscapes." (*Mallee Regional Catchment Strategy 2013-19*)

Our Mission

"To ensure natural resources in the region are managed in an integrated and ecologically sustainable way and in accordance with our community's expectations."

Our Values

In delivering against these priorities the Mallee Catchment Management Authority Board, management and staff will demonstrate the values and behaviours stated below.



Figure 1 | Mallee CMA Values and Behaviours.

Manner of establishment and responsible Ministers

The Mallee Catchment Management Authority (CMA) is established under the *Catchment and Land Protection Act 1994* (Vic) (CaLP Act). The responsible Ministers for the period from 1 July 2018 to 30 June 2019 were the Hon Lisa Neville MP, Minister for Water and the Hon Lily D'Ambrosio MP, Minister for Energy, Environment and Climate Change.

Nature and range of services provided

The Mallee CMA region covers 39,939 km², around one-fifth of Victoria. The largest catchment management area in the state, it runs along the Murray River from Nyah to the South Australian border and south through vast dryland cropping areas and public reserves (see Figure 2).

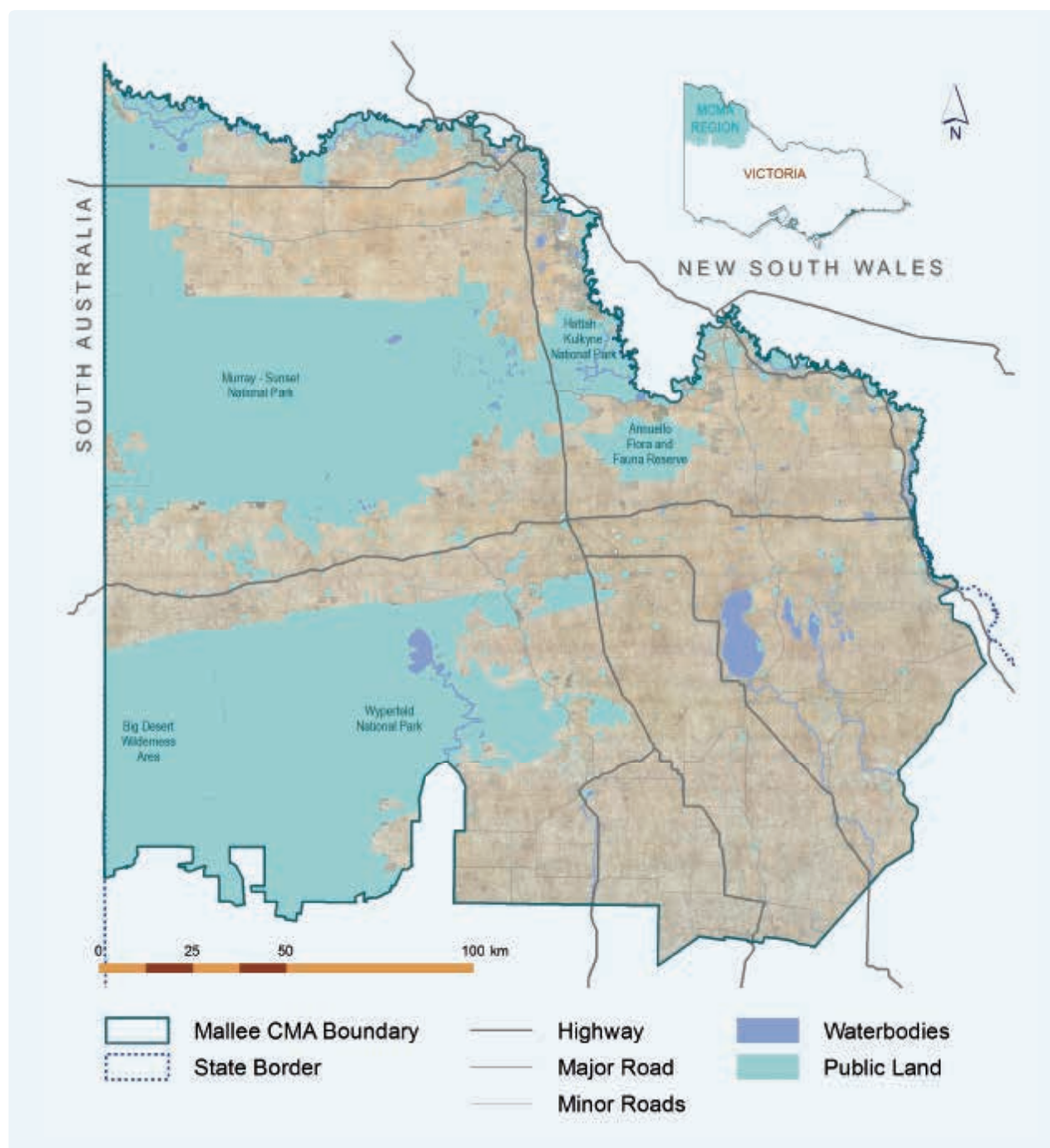


Figure 2 | Map of Mallee CMA region.

The primary role of the Mallee CMA is to facilitate integrated and ecologically sustainable management of natural, cultural and productive landscapes occurring within the region. Programs and projects are developed to deliver against the region's priorities for these landscapes, as detailed in the Mallee Regional Catchment Strategy 2013-19 (RCS) and its associated sub-strategies and plans. The Mallee RCS is prepared under the provisions of the CaLP Act, in partnership with regional stakeholders, as a framework for strategic action to support and focus the ongoing coordinated efforts of the region's land managers, government agencies and community groups.

Within this context, Mallee CMA investment planning and delivery are informed by the long-term (20 year) objectives and strategic (6 year) actions set by the RCS for each of the following regional asset types:

- Rivers;
- Wetlands;
- Threatened species and communities;
- Terrestrial habitat;
- Groundwater;
- Soils;
- Agricultural land;
- Culture and heritage; and
- Community capacity for Natural Resource Management (NRM).

A suite of RCS sub-strategies and plans (e.g. Mallee Waterway Strategy, Mallee Indigenous Participation Plan, Mallee Landcare Support Strategy, Mallee Irrigation Region Land and Water Management Plan, Mallee Floodplain Management Strategy) provide additional detail on the activities required to protect and enhance regional assets, and the roles and responsibilities of regional stakeholders in the delivery of these activities. These are further complemented by site-based plans (e.g. Environmental Watering Management Plans) which establish priorities and delivery mechanisms.

The RCS monitoring, evaluation, reporting and improvement (MERI) framework is applied to all Mallee CMA activities to support continuous improvement and adaptive management processes.

Key regional stakeholders engaged in the development, delivery and review of the Mallee RCS and its associated sub-strategies include: government agencies; local government; water corporations; community and industry-based groups; private land managers; and Traditional Owners. Participation by the broader Mallee community in natural resource management (NRM) activities is also supported to facilitate awareness and skills-based outcomes.

Objectives, functions, powers and duties

As a statutory authority, the Mallee CMA has clear duties and accountabilities set out in legislation. The Statement of Obligations for the *Catchment and Land Protection Act 1994* (Vic) and the *Water Act 1989* (Vic) set out the key business undertakings of the Mallee CMA as being to:

- Facilitate and coordinate the management of catchments in an integrated and sustainable manner as it relates to land, biodiversity and water resources;
- Plan and make decisions within an integrated catchment management context that balance social, economic and environmental outcomes;
- Target investment to address priorities and deliver maximum improvement in resource condition of catchments, land, biodiversity and water resources;
- Provide opportunities for community engagement in the integrated management of catchments and natural assets including land, biodiversity and water resources;
- Develop strategic partnerships with relevant stakeholders including public authorities and government agencies;
- Promote and apply a risk management approach which seeks to protect, enhance and restore natural assets and reduce the impact of climate change;
- Promote and adopt an adaptive approach to integrated catchment management, including continuous review, innovation and improvement;
- Manage business operations in a prudent, efficient and responsible manner;
- Act as the caretaker of river health and provide regional leadership on issues relating to river health; and
- Undertake the operational management of the Environmental Water Reserve as a key component of an integrated program of river, wetland, floodplain and aquifer restoration.

The *Public Administration Act 2004* (Vic) and the *Financial Management Act 1994* (Vic) together with the Mallee CMA's Board Charter of Corporate Governance, also provide guidance for the Mallee CMA in relation to its governance requirements.

Part 1

Performance Reporting - Non-financial



Achievements, Operational Performance and Key Initiatives

The *Mallee CMA Corporate Plan 2018-23* establishes three objectives to inform organisational priorities in delivering against the vision over the next five years.

Thematic areas and strategic outcomes the Mallee CMA is seeking to achieve and under each objective have been developed to reflect existing delivery and reporting frameworks (both regional and state), and the Mallee CMA's legislative obligations (see Table 1).

Table 1 | Mallee CMA 2018-23 business objectives strategic outcomes

Business Objectives	Theme	Strategic Outcomes
Ensure that community is central to the planning, implementation, and evaluation of natural resource management (NRM).	Community Capacity for NRM	NRM stakeholders and the broader community are aware of and participating in efforts to protect the Mallee's natural, cultural and productive values.
		NRM stakeholders are being supported to identify, and where appropriate respond to emerging threats and opportunities.
Protect and enhance the region's natural, cultural and productive values.	Waterways	Priority waterways and associated riparian habitat are providing enhanced social, economic and environmental services to the community.
	Biodiversity	The ecosystem services provided by targeted terrestrial habitat are being protected and enhanced.
		The viability of targeted threatened species and communities is being protected and enhanced.
	Land	Management practices are being implemented to optimise the productive capacity of agricultural land while protecting associated natural values.
Strengthen our capacity to operate as a corporately and socially responsible organisation.	Culture & Heritage	Cultural heritage sites are being recognised and protected as an integral component of all land, water and biodiversity management processes.
	Governance & Compliance	Internal governance processes are ensuring compliance with all legislative requirements and statutory functions.
	Integrated Catchment Management	Regional planning, delivery and evaluation processes are supporting integrated and targeted NRM outcomes.

Delivery against these strategic outcomes is guided by priority initiatives and activities identified within the *Mallee CMA Corporate Plan 2018-23*. These priorities are reviewed annually to ensure alignment with the organisation’s core responsibilities (e.g. *Catchment and Land Protection Act 1994* Statement of Obligations and in the *Water Act 1989* Statement of Obligations) and strategic framework (e.g. Mallee Regional Catchment Strategy). Identified activities also reflect Ministerial expectations and performance priorities for seven government policy areas; specifically:

- 1 Climate Change
- 2 Waterway and catchment health
- 3 Water for Agriculture
- 4 Community engagement and partnerships
- 5 Resilient and liveable cities and towns
- 6 Recognise and support Aboriginal cultural values and economic inclusion in the water sector
- 7 Recognise recreational values
- 8 Leadership, diversity and culture
- 9 Improved performance and demonstrating outcomes

Organisational performance against outcome indicators and activity measures established for each business objective and associated themes (i.e. as detailed by the 2018-23 Corporate Plan) is provided in the following sections.

Figure 3 illustrates the ‘Key to Results’ system applied within the report to indicate the extent of underachievement or overachievement of activity indicator targets when reporting on their performance.

✓	Performance target achieved or exceeded or expected to be achieved.
■	Performance target not achieved - exceeds 5% variance.
○	Performance target not achieved - within 5% variance.

Figure 3 | Activity performance key to results



Mallee CMA Corporate Plan 2018-23.

Reporting progress towards Mallee CMA performance objectives, indicators and/or outputs (non-financial)

Business Objective

1

Ensure the community is central to the planning, delivery and evaluation of natural resource management (NRM)

Theme: Community capacity for NRM

Communities of the Mallee are at the centre of the current and future management of our natural, cultural and productive landscapes. NRM is a co-operative endeavour between the community, industry, and government, with effective action requiring effective partnerships founded on a well-informed community with the skills and confidence to identify, direct and implement change. By working with our community and delivery partners, the Mallee CMA is seeking to deliver against the following capacity related outcomes:

- NRM stakeholders and the broader community are aware of and participating in efforts to protect the Mallee's natural, cultural and productive values.
- NRM stakeholders are being supported to identify, and where appropriate respond to emerging threats and opportunities.

Delivery against these stated outcomes will also contribute to achieving priorities established by key policy and strategic frameworks, including:

- Our Catchments, Our Communities Strategy (2016-19), a State framework for effective community engagement in catchment management
- Community Engagement and Partnerships Framework for Victoria's Catchment Management Authorities (2017)
- DELWP Aboriginal Inclusion Plan: Munganin – Gadhaba (2016-20)
- Aboriginal Participation Guidelines for Victorian Catchment Management Authorities (2016)
- Mallee CMA Indigenous Participation Plan (2016-19)
- Mallee CMA Reconciliation Action Plan (2018)
- Ministerial Expectations for 'community engagement and partnerships' and 'recognise and support Aboriginal cultural values and economic inclusion in the water sector' (2018-19).

Outcome Indicators and Performance Measures

Progress against these strategic outcomes is measured through organisational performance against five key indicators (see Table 2). Over the four year reporting period, Mallee CMA programs have continued to apply a strong community focus as the cornerstone of NRM delivery. This has included the delivery of targeted events to build stakeholder capacity and enhance the region's cooperative delivery approaches; with activities such as field days, workshops, and training events collectively

engaging 34,321 participants. These activities are well received, with more than 90% of participants consistently providing positive feedback on their overall delivery. Since participant evaluations commenced in 2014-15, 62% of respondents have provided an 'excellent' rating and 32% 'good'; with 4% rating them as 'poor' and 2% 'very poor'. The effectiveness of the engagement approaches being employed to build capacity is also demonstrated by ongoing evaluations; with an average 65% increase in 'awareness of NRM issues' being reported by participants, and an average 14% increase in skills to 'address threat processes'.

Materials produced to promote our region, the NRM programs being delivered and involvement opportunities also continue to reach a large and diverse audience. Application of social media engagement has steadily increased since launching on platforms such as Twitter, Instagram, and Facebook, with Mallee CMA Facebook posts alone growing from 330 in 2017-18 to 554 posts in 2018-19. The average daily reach of our Facebook page (number of people with any page content enter their screen) for 2017-18 was 2,236 people, remaining stable in 2018-19 (average of 2,275 people per day). In the past two years 16 of our Facebook posts have reached over 10,000 people (7 in 2017-18 and 9 in 2018-19), including a video of Regent parrots at Hattah (<https://www.facebook.com/malleecma/posts/755878121419645>), a post about Murray Cod at Mullaroo Creek (<https://www.facebook.com/malleecma/posts/832547937085996>) and a post on the Quandong tree and how Aboriginal people use it (<https://www.facebook.com/malleecma/posts/765107297163394>). Both video and photo posts perform well, with interest being generated on topics including environmental watering, native animals, biodiversity projects, grants and incentive programs, and general facts and information about the region.

Aboriginal cultural values and economic inclusion in the development and delivery of Mallee CMA programs continue to be supported through the implementation of activities which progress Mallee CMA Indigenous Participation Plan (2016-2019) identified objectives and priority actions. This has included ongoing coordination of the Mallee Aboriginal Reference Group (ARG), which provides an important, direct connection to Traditional Owner and Aboriginal community groups across the Victorian Mallee. This forum meets quarterly to participate in regional planning processes, and to identify opportunities for Aboriginal people to be involved in the delivery of associated NRM initiatives; with the positive influence of this consultation demonstrated through annual increases

in the proportion of engagement activity participants identifying as Aboriginal or Torres Strait Islander.

Other key partnership outcomes over the reporting period have included support for the First People of the Millewa-Mallee Registered Aboriginal Party (RAP) to develop a Whole of Country Plan; working with the Murray Lower Darling Rivers Indigenous Nations (MLDRIN) to undertake Aboriginal Waterway Assessments at priority waterways; and engaging numerous local Aboriginal community groups to undertake cultural heritage assessments and on On-Country visits across the region.

Further detail on community capacity for NRM condition benchmarks, medium-term trends, and the expected contribution of activities delivered in 2018-19 is provided in the Community section of the Condition and Management Report.

Activity Indicators and Performance Measures

Performance against the organisations 2018-19 priority activities for progressing community capacity outcomes, including actual delivery against budgeted targets are provided in Table 3. Overall, 100% of performance targets were achieved or exceeded over the reporting period.

Key initiatives and projects

Initiatives which supported the Mallee CMA to deliver against the stated priority activities and associated performance targets in 2018-19 included both State and Commonwealth funded programs. An overview of these contributions in relation to building Community Capacity for NRM is provided in Table 4.

Table 2 | Progress against performance measures for Community Capacity for NRM strategic outcome indicators.

Outcome Indicators	Performance measures	Unit of measure	2015-16	2016-17	2017-18	2018-19
Increased participation in community engagement and capacity building activities	Community members & stakeholders attending engagement activities	number of participants	8,586	9,135	8,905	7,695
		number of events	508	681	660	670
	Participants rating engagement activities as 'good' or 'excellent'.	percent of respondents	98	92	93	97
	Participants at engagement activities identifying as Aboriginal or Torres Strait Islander.	percent of respondents	4	6	12	17
Increased awareness of the region's natural, cultural and productive values	Increase in awareness of NRM issues reported by capacity building activity participants.	percent increase (average)	N/a	58	66	71
Increased skills in identifying and delivering priority NRM activities	Increase in skills to address threat processes reported by capacity building focused activity.	percent increase (average)	N/a	16	12	15
Increased cooperative action in planning and delivering priority NRM activities	Formal partnerships established or maintained to inform project planning and delivery processes.	number of partnerships	182	149	145	175
	Management agreements established or maintained with land managers to deliver targeted NRM activities.	number of management agreements	164	163	156	157
		area (ha) covered by management agreements	N/a	N/a	45,475	73,398
Increased information sharing in promoting NRM and associated evidence base	Communication materials produced to promote programs, activities, etc.	number of publications	349	330	509	568

Table 3 | Performance against 2018-19 Community Capacity for NRM activity measures.

Activity Indicators	Performance measures	Unit of measure	2018-19 actual	2018-19 target	Performance variation (%)	Result
Build extensive, effective and consistent approaches to community engagement and partnerships in regional planning and implementation.	Regional planning and delivery partnership forums facilitated/ coordinated to meet internal and/or government requirements.	Number of forums	16	16	0	✓
	Delivery against 2018-19 Mallee CMA Stakeholder Engagement Strategy priorities.	Percent of priorities delivered against	100	100	0	✓
Work collaboratively with organisations and communities to strengthen engagement approaches and capacity.	Formal partnerships established/ maintained.	Number of partnerships	175	166	5	✓
Develop and implement education programs which increase awareness of the Mallee's natural, cultural and productive values; and encourage actions which contribute to their protection and enhancement.	Engagement activity participants.	Number of participants	7,695	5,016	53	✓
	Participants rating engagement activities as 'good' or 'excellent'.	Percent of respondents	97	>90	0	✓
	Communication materials produced and disseminated	Number of publications	567	477	19	✓
Support Indigenous communities to participate in the development, delivery, and evaluation of NRM programs and activities.	Delivery against Mallee CMA Indigenous Participation Plan objectives.	Percent of objectives delivered against	100	100	0	✓
	Participants at engagement activities identifying as Aboriginal or Torres Strait Islander.	Percent of respondents	17	15	2	✓
	Aboriginal Groups with recognised native title rights or formal agreements with the state, engaged in NRM planning & implementation.	Number of groups	2	2	13	✓



Working collaboratively with the Uttiwillcock community to strengthen engagement and capacity.

Table 4 | Key outputs delivered under government programs/initiatives contributing to the achievement of 2018-19 priority 'Community Capacity for NRM' activities and associated performance targets.

Program/Initiative	Key 2018-19 outputs and achievements
Waterway Health Program	<p>Projects including the Regional Riparian Action Plan (RRAP), On-Ground Works, Water Statutory Functions, and Ramsar Management are supported by the Mallee CMA, through funding from the Victorian Government's Waterway Health Program.</p> <ul style="list-style-type: none"> • 79 events delivered (404 participants) to promote the region's riparian values and engage stakeholders in their management. This included ongoing support for Citizen Science activities such as 'Waterwatch'. Now in its 17th year, the program collects data for nine sites at Kings Billabong and Sandilong Creek. Eleven citizen scientists are also continuing to monitor bird populations as part of a volunteer group established in 2017-18. Over the last twelve months, they have completed 55 surveys and surveyed 11,115 birds, with data stored in Birdlife Australia's online portal. A new turtle monitoring program was established in 2018-19 in partnership with a local Koori Engagement Support Officer (KESO positions are State-funded roles designed to engage and support Aboriginal students within schools). Through the program students from Red Cliffs Secondary College and the local Nyah community participated in field excursions and workshops to learn about the Mallee's three local freshwater turtles and how to register turtle nests using the app Turtle SAT. Several participants from the workshops have indicated their interest in continuing with this monitoring. • 41 publications disseminated to promote program achievements and engage regional stakeholders. This included 17 Facebook posts, reaching a combined audience of 24,604. • 14 management agreements established with private land managers, community groups, Parks Victoria (PV), Mildura Rural City Council (MRCC) and Lower Murray Water (LMW) for the delivery of priority riparian works. • 12 formal partnerships established/maintained to facilitate coordinated approaches to the development, implementation, and review of regional waterway health-related activities. This included the ongoing coordination/facilitation of the Hattah Ramsar Coordinating Committee, which was established to manage the implementation of the Ramsar site management plan. Several new delivery partnerships were also established with community groups in 2018-19 as part of the Angler Riparian Partnership program, where agreements with OzFish Unlimited and Nyah-Nyah West United Football and Netball Club were put in place for the delivery of riparian restoration works in 2019-20.  <p>Red Cliffs Secondary College students monitoring turtle nests.</p>
Environmental Water Program	<p>Projects including Environmental Watering Reserve Officers, Community Engagement and Shared Benefits are supported by the Mallee CMA, through funding from the Victorian Government's Environmental Water Program.</p> <ul style="list-style-type: none"> • 8 Environmental Water Management Plans (EWMP's) reviewed and updated, for River Murray wetland, floodplain, and Wimmera Mallee Pipeline sites. • 14 Environmental Watering Delivery Proposals/Plans developed in consultation with land managers, community groups and other stakeholders; and 21 agreements established with private landholders to ensure permission to provide water to privately owned wetland sites. • 240 Assessments (e.g. cultural, environmental, spatial and social) to inform the development of the above plans and monitor inundation extent and ecological responses to watering. For example, 116 surface water assessments were completed to help ground-truth LiDAR and Digital Elevation Model (DEM) data used to map the topography of individual wetlands, enhancing capacity to evaluate actual inundation extent against the proposed extent. • 21 Formal partnerships established and/or maintained with governmental departments, water authorities and natural resource managers from three states to ensure collaboration and support of the environmental watering program. This included working with the NSW Department of Industry Water (DoIW), Victorian Environmental Water Holder (VEWH), Commonwealth Environmental Water Holder (CEWH), Murray Darling Basin Authority (MDBA) and NSW Office of Environment and Heritage (OEH) to establish a Project Steering Committee (PSC) for the Lindsay Mulcra Wallpolla icon site and associated River Murray channel. • 171 publications (visual, written) disseminated to promote the region's waterway values and the shared benefits of environmental watering. These included targeted materials (e.g. flyers, media releases, videos) to promote seasonal watering proposals and delivery, and over 140 social media posts to promote program achievements and opportunities for the community to be involved. Two children's activity books were also created to celebrate the shared benefits associated with children visiting creeks and wetlands located within Merbein Common and Lindsay Island. The books outline the environmental and cultural values of both of these sites and provide engaging activities for children. The activities include citizen science projects, bushwalks, puzzle, and games. Both books were undertaken in collaboration with the Aboriginal community, which included a bus tour to Lindsay Island with young Aboriginal children who were delighted to spend time with elders and learn about their culture. • 56 events delivered (2,196 participants) with a focus on developing water literacy for key stakeholders and continuing citizen science-based activities. New stakeholders engaged by the third year of the water literacy program included members of the Australian Plant Society Mildura and Mildura District Aboriginal Service (MDAS). Frog monitoring workshops engaged with a broad range of stakeholders in the Mildura and Nyah areas.

Continued...

Table 4 | Key outputs delivered under government programs/initiatives contributing to the achievement of 2018-19 priority 'Community Capacity for NRM' activities and associated performance targets. *Continued...*

Program/Initiative	Key 2018-19 outputs and achievements	
Our Catchments, Our Communities Program	The Our Catchments, Our Communities Program is supported by the Mallee CMA, through funding from the Victorian Government.	
	<ul style="list-style-type: none"> • 54 Engagement events delivered (347 participants), 9 publications disseminated and 32 formal partnerships established/maintained to facilitate stakeholder/community input into development and delivery of the Tyrrell Project; a community-driven project that celebrates the unique social, cultural and environmental values of an iconic landscape. • A further 14 events (253 participants) were facilitated and 9 formal partnership arrangements established/maintained to support delivery against broader state-wide priorities identified in the <i>Our Catchments, Our Communities' Integrated Catchment Management Strategy</i>. This included workshops with the Mallee Aboriginal Reference Group, the Land and Water Community Advisory Committee, and Catchment Partnership Committees (Biodiversity and Sustainable Agriculture) to engage members in the planning, implementation, and evaluation of regional NRM activities. • Ongoing coordination/facilitation of the Catchment Partnership Agreement (CPA) forum was also supported to further strengthen collaborations between key regional delivery partners. Mallee CMA, LMW, MRCC, Trust for Nature, PV, DELWP, and Department Jobs, Precincts and Regions (DJPR) are signatories to the CPA. 	<ul style="list-style-type: none"> • 13 Management agreements established with land managers and community groups, and committees of management to facilitate the delivery of works programs across 3,843ha. • 36 Assessments (flora, invasive species, social) undertaken to evaluate the effectiveness of on-ground works and help inform future delivery. • 11 community members receiving 'regional leadership grants' to support their attendance at events such as the National Reconciliation Action Plan Conference and Women in Leadership Forum. An event delivered with Sunraysia Mallee Ethnic Communities Council under this grant program also provided 35 people who are new to the region and from culturally diverse backgrounds with the opportunity to participate in workshops on native animals and river use.
Sustainable Irrigation Program	Projects including Environmental Watering Reserve Officers, Community Engagement and Shared Benefits are supported by the Mallee CMA, through funding from the Victorian Government's Environmental Water Program.	
	<ul style="list-style-type: none"> • 11 Plans, including 4 on-farm Irrigation and Drainage Management Plans (IDMP) to support improved on-farm water use efficiency, and subsequent reductions in groundwater accessions. • 18 formal partnerships established/maintained to support the development and delivery of sustainable irrigation activities in the Mallee Region. This included the ongoing operation of a Project Steering Committee to lead the renewal of the <i>Mallee Irrigation Region Land and Water Management Plan</i> (due for completion early 2020). • 17 publications disseminated to promote and/or report key 18/19 activities. Key outcomes included completion of the Irrigation Status and Crop Report in March 2019, providing high-quality longitudinal data over twenty years on irrigation development in the Mallee. 	<ul style="list-style-type: none"> • 46 Engagement events delivered (539 participants) including 12 irrigator focused workshops promoting improved water management practices. A marquee with a joint exhibition from Mallee CMA, PV, Agriculture Victoria Research, Greater Sunraysia Pest Free Area, and the National Centre for Farmer Health provided the opportunity to deliver an interactive activity for irrigators using IrriSAT to determine irrigation demand for last season and crop health variability for their farm.
Victorian Landcare Program	The Victorian Landcare Program is supported by the Mallee CMA, through funding from the Victorian Government.	
	<ul style="list-style-type: none"> • 28 Regional Landcare groups provided with ongoing coordination and support. • 15 Landcare/community groups provided with devolved grants under management agreement to support the delivery of local priorities. • 29 Landcare members participating in 7 awareness raising/training events. 	

Continued...

Table 4 | Key outputs delivered under government programs/initiatives contributing to the achievement of 2018-19 priority 'Community Capacity for NRM' activities and associated performance targets. *Continued...*

Program/Initiative	Key 2018-19 outputs and achievements	
Threatened Species Initiative	The Threatened Species Protection Initiative is supported by the Mallee CMA, through funding from the Victorian Government to progress implementation of the Victorian Biodiversity Strategy.	
	<ul style="list-style-type: none"> • 18 Plans developed, encompassing detailed Traditional Owner engagement plans and management plans for each of the programs 8 priority landscapes being targeted for delivery (i.e. Annuello, Cardross, Cowangie, Hattah, Robinvale/Nyah, Tyrrell, Wyperfeld, and Yarrara), and the whole of region feral cat control project. • 27 Formal partnerships established and/or maintained to facilitate collaborative approached to planning and delivery. • 151 Assessments (cultural, ecological, fauna, flora and invasive species) undertaken to evaluate the effectiveness of on-ground works and help inform future delivery priorities. 	<ul style="list-style-type: none"> • 83 Engagement events delivered (517 participants), 44 publications disseminated and 27 formal partnerships established/maintained to facilitate stakeholder/community input into the development and delivery of project activities. This included workshops with the Mallee CMA advisory groups (Aboriginal Reference Group, Land and Water Advisory Committee) and the Project Steering Committee to provide progress updates and seek feedback on future activities. • 39 Management agreements established and/or maintained with private land managers to facilitate the delivery of priority works programs.
Mallee Salinity Investment Plan	Key achievements delivered by projects funded from the Salinity Offsetting Charges and the Salinity Offset Levy, (collected specifically to offset salinity impact of irrigation development from Nyah to the South Australian Border) included:	
	<ul style="list-style-type: none"> • 8 Formal partnerships established/maintained to facilitate stakeholder input into the development, delivery, and evaluation of program activities. This includes the ongoing operation of the Salinity Accountability Advisory Committee (SAAC). • 531 Bores monitored (continuously, quarterly, biannually or annually) for salinity and groundwater level data as part of the Mallee Groundwater Monitoring Program to track changes to groundwater levels, salinity concentrations and salt loads across the region. • 19 Irrigation drainage sites and 3 in-stream river sites monitored for salinity and flow data to inform salinity impact assessments. 	<ul style="list-style-type: none"> • 14 Engagement events delivered (535 participants) and 40 publications developed/disseminated to promote and/or report key activities. An ongoing focus of these activities is to re-build community awareness, understanding, and commitment to the salinity management framework. • Key regional studies have also been progressed and reported including Model refinement to improve the estimation of salinity impacts from irrigation and application of satellite imagery and Mallee climate information to derive water use requirements and root zone drainage for almonds, citrus and vine grapes in the Victorian Mallee.
Murray-Darling Basin Plan	The Victorian Murray Floodplain Restoration Project (previously Sustainable Diversion Limit (SDL) works program) is funded by the Commonwealth Department of Agriculture and Water Resources.	
	<ul style="list-style-type: none"> • 43 Events (534 participants) to engage regional stakeholders and the wider community members in the planning, development, and implementation of environmental infrastructure projects. This included presentations, field trips, and workshops with a broad range of stakeholder groups (e.g. Traditional Owners, irrigators, water authorities, water traders, local government, community NRM groups, and environmental water holders). 	<ul style="list-style-type: none"> • 8 Fish management plans developed to encompass each of the 7 delivery sites, (Lindsay Island, Wallpolla Island, Hattah Lakes Stage 2, Belsar Island, Burra Creek, Nyah, and Vinifera), and an overarching plan to cover all sites.
	The Living Murray (TLM) is a joint initiative funded by the New South Wales, Victorian, South Australian, Australian Capital Territory, and Commonwealth governments, coordinated by the Murray Darling Basin Authority.	
	<ul style="list-style-type: none"> • 45 Assessments are undertaken to support ongoing monitoring of the impacts of TLM investment over time on both threat mitigation (short-term) and resource condition (long-term). Key activities included ongoing monitoring of surface water, fish movement, woodland, and water bird species, and vegetation health within the two Icon Sites (Hattah and Lindsay, Mulcra, Wallpolla). Findings from these assessments were reported through 25 written publications. 	<ul style="list-style-type: none"> • 59 Events engaged 443 participants in activities such as field days, workshops, and training events. With target audience including Aboriginal stakeholders, community groups with an NRM and recreational focus (e.g. angler groups), Commonwealth and Victorian Environmental Water Holders, and the Operational Advisory Group (OAG).

Continued...

Table 4 | Key outputs delivered under government programs/initiatives contributing to the achievement of 2018-19 priority 'Community Capacity for NRM' activities and associated performance targets. *Continued...*

Program/Initiative	Key 2018-19 outputs and achievements
National Landcare Program	<p>Regional Land Partnership Projects including: Core Services, Threatened Species Services, Threatened Ecological Community Services, and Soil Services are supported by the Mallee CMA through funding provided by the Australian Government's National Landcare Program.</p> <ul style="list-style-type: none"> Continued, effective function of the Mallee CMA Aboriginal Reference Group in fostering communications with Aboriginal stakeholders and providing input into regional initiatives and plans. 70 Engagement events delivered (1,329 participants) to build stakeholder awareness of and capacity for regional delivery against program priorities i.e. nationally significant threatened species (Malleefowl and Plains-wanderer) and communities (Buloke Woodlands); and sustainable agriculture management practices. Activities included field days, workshops, and training events. Citizen science approaches were also employed to engage the local community in monitoring priority species/communities and the impact/incidence of associated threat processes. 61 Publications disseminated to engage stakeholders and promote delivery against National Landcare priorities. These included 9 social media posts to 3,858 Facebook followers; 29 written publications (factsheets, media releases, poster displays); 4 virtual tours of regional wind erosion risk-focused research trials, reaching an estimated audience of 850 community members/industry representatives; and production of 2 editions of the Mallee Farmer Newsletter, a longstanding and well recognised publication with a circulation of around 1,200. 39 Assessments undertaken to support ongoing monitoring of the impacts of investment over time on both threat mitigation (short-term) and resource condition (long-term). This included the delivery of a survey by the Birchip Landcare Group to verify the persistence of Plains-wanderer based on a review of previously surveyed habitat and potential habitat. The establishment of an Adaptive Management Predator Experiment (AMPE) in partnership with the National Malleefowl Recovery Group is investigating the efficacy and impact of fox baiting programs.



Aboriginal children were delighted to spend time with elders and learn about their culture at Lindsay Island.

Theme: Waterways

Mallee CMA is the regional caretaker for waterway health and relies on the development and implementation of robust and effective management plans at a national, state, regional, and local level to address key threatening processes in an integrated and targeted way. By continuing to work with regional partners and local stakeholders to deliver against priorities identified under this framework, the Mallee CMA is seeking to deliver against the following Waterway related outcome:

- Priority waterways and associated riparian habitat are providing enhanced social, economic and environmental services to the community.

Delivery against this stated outcome will also contribute to achieving priorities established by key policy and strategic frameworks, including:

- Water for Victoria (2016)
- Mallee Waterway Strategy (2014-22)
- Regional Riparian Action Plan (2015-20)
- Environmental Watering Management Plans
- Our Catchments, Our Communities Strategy (2016-19)
- Hattah-Kulkyne Lakes Ramsar Site Ecological Character Description (2011) and Annual Work Plan (2018-19)
- Ministerial Expectations for 'waterway and catchment health' and 'recognise recreational values' (2018-19).

Outcome Indicators and Performance Measures

Progress against these strategic outcomes is measured through organisational performance against five key indicators (see Table 5).

Delivery of over 65,000ha and 250km of environmental works over the 2015-19 reporting period represents significant progress against both the short term (activity/output) and medium-term (outcome) targets set by the Mallee Waterway Strategy 2014-22 (MWS) for priority waterways within each of the region's 23 Waterway Management Units. Ongoing application of the Regional Riparian Action Plan 2015-20 (RRAP), a Victorian Government initiative, has built on the MWS by further targeting investment and accelerating improvement in the condition of riparian land for priority waterways.

Management of the four sites identified by Water for Victoria (2016) as a priority for the Mallee (i.e. Merbein Common wetlands, Lindsay-Wallpolla Islands, Belsar-Yungera Floodplain complex, Kings Billabong and Woollong complex) has continued to be a priority under State funded Waterway Health funded programs; supporting the delivery of environmental, economic, social and cultural outcomes at each site. Of particular

note is the suite of works implemented at the Merbein Common wetlands site, Mallee CMA's flagship waterway project 'There's nothing common about Merbein Common'. This initiative has delivered significant improvements in habitat condition and recreation opportunities by rationalising non-arterial user made tracks (20km), controlling priority pest plants (343ha), establishing native vegetation (4ha), and installing visitor facilities such as canoe launches, boat ramps, new walking tracks, all-weather access tracks, and new camping areas. All works have been directly influenced by community feedback and advice, with community groups such as the Friends of Merbein Common, Yelta Landcare Group, and Mildura 4WD Club all heavily involved in the planning, prioritisation, and delivery of works.

The Mallee CMA places high importance on enhancing the recreational values of our priority waterways to support the well-being of rural and regional communities; with 32 individual visitor facilities installed over the past two years and community identified recreational values incorporated into associated Environmental Water Management Plans to inform the identification and delivery of future watering events. Targeted community evaluation surveys are undertaken to identify highly valued sites, why they are important, how they are being used, and the types of actions that would further enhance visitor experience. This information is being communicated back to the community and other stakeholders via a range of mediums including short videos, Facebook posts, media releases; and through formal planning processes (i.e. EWMP reviews, Seasonal Watering Proposals, and Site Delivery Plans). Partnerships developed with tourism groups such as Murray Offroad Adventures, Houseboats Mildura, and Mildura and Swan Hill information centres are also helping to promote community recreation objectives and the shared benefits of waterway management.

Further detail on Waterway condition benchmarks, medium-term trends, and the expected contribution of activities delivered 2018-19 is provided in the Waterway section of the Condition and Management Report.

Activity Indicators and Performance Measures

Performance against the organisations 2018-19 priority activities for progressing Waterway outcomes, including actual delivery against budgeted targets are provided in Table 6. Overall, 100% of performance targets were achieved or exceeded over the reporting period. While 2018-19 targets for most environmental works were substantially lower than the previous year to allow for an increased focus on infrastructure and recreation outcomes, actual achievements were still well above

forecast. This is in part due to the area of follow up works undertaken to control priority pest plant and animal species and secure previous gains (i.e. able to treat a larger area with available resources). For example, the aim of achieving 100% eradication of active willow trees on the Victorian side of the Murray River was progressed with follow up treatments to areas controlled in 2017-18; specifically 25km of river frontage from Merbein to Wallpolla and 90km of river frontage from Nichols Point to Colignan.

Key initiatives and projects

Initiatives which supported the Mallee CMA to deliver against their stated priority activities and associated performance targets in 2018-19 included both State and Commonwealth funded programs. An overview of their contribution in relation to Waterway management is provided in Table 7.

Table 5 | Progress against performance measures for Waterway strategic outcome indicators.

Outcome Indicators	Performance measures	Unit of measure	2015-16	2016-17	2017-18	2018-19
Reduced impact of targeted invasive flora and fauna species.	Waterways treated for priority pest animal species	hectares	15,262	8,716	34,748	8,624
	Waterways treated for priority weed species	hectares	2,687	1,783	8,149	3,310
Increased diversity, extent and ecological connectivity of priority habitat (aquatic, riparian).	Native vegetation established	hectares	6	6	32	100
	Road rationalisation and repair works	kilometres	52	2	4	37
Increased distribution and extent of targeted threatened species and communities.	Exclusion fencing installed	kilometres	13	80	25	39
Increased delivery of watering regimes which meet environmental and recreational objectives.	Sites receiving environmental water to deliver against Environmental Watering Management Plans.	number	58	54	48	48
		hectares	2,897	8,633	6,696	559
Increased amenity provided by, and accessibility to waterways	Visitor facilities installed	number	0	0	7	25



Environmental water delivery progress at Kramen regulator, Hattah.

Table 6 | Performance against 2018-19 Waterway activity measures.

Activity Indicators	Performance measures	Unit of measure	2018-19 actual	2018-19 target	Performance variation (%)	Result
Implement priority management activities established by the Mallee Waterway Strategy (2014-22) and associated Regional Riparian Action Plan (2015-20).	Waterways treated for priority pest animal species	hectares	8,624	3,345	158	✓
	Waterways treated for priority weed species	hectares	3,310	833	297	✓
	Native vegetation established	hectares	100	29	245	✓
	Road rationalisation and repair works	kilometres	37	32	16	✓
	Exclusion fencing installed	kilometres	39	9	333	✓
Support implementation of Victoria's strategic plan for managing water resources into the future, Water for Victoria (2016); by delivering large scale waterway projects identified as a priority for the Mallee.	Water for Victoria identified priority sites managed to support delivery against identified environmental, economic, social and cultural outcomes.	percent	100	100	0	✓
Develop and implement Seasonal Watering Proposals (SWPs) to align with and deliver against site based Environmental Watering Management Plans.	SWPs developed, approved and delivered to direct management of priority waterways.	number	4	4	0	✓
	Sites receiving environmental water	number	48	45	7	✓
Plan for and provide water services that explicitly consider recreational values as part of the broader water management framework.	Community evaluation surveys undertaken to identify recreational values of local waterways	number	3	3	0	✓
	Visitor facilities established.	number	25	21	19	✓
Support planning and implementation of the Basin Plan to align with the Victorian Government's approach	Sustainable diversion limit (SDL) sites progressed as per delivery plan/ government requirements	number	7	7	0	✓
Implement the Murray-Darling Basin Authority's The Living Murray Program at Lindsay, Mulcra and Wallpolla Islands; and Hattah Lakes.	TLM sites managed, monitored and reported as per contractual/government requirements	number	2	2	0	✓

Table 7 | Key outputs delivered under government programs/initiatives contributing to the achievement of 2018-19 priority 'Waterway' activities and associated performance targets.

Program/Initiative	Key 2018-19 outputs and achievements	
Waterway Health Program	Projects including the Regional Riparian Action Plan (RRAP), On-Ground Works, Water Statutory Functions, and Ramsar Management are supported by the Mallee CMA, through funding from the Victorian Government's Waterway Health Program. Works are targeted to priority waterways with the objective of improving associated riparian values.	
	<ul style="list-style-type: none"> Ongoing delivery against the Mallee Riparian Action Plan (2015/16 - 2019/20); building on the Mallee Waterway Strategy (2014-22) by further targeting investment and accelerating improvement in the condition of riparian land for priority waterways. 7,883ha and 48km of targeted on-ground works (e.g. revegetation, track rationalisation, pest plant and animal control, and exclusion fencing) delivered in partnership with land managers and local community groups. Key outcomes included follow up treatment of the 2017-18 willow control project, with the aim of achieving 100% eradication of active trees on the Victorian side of the Murray River from Merbein to Wallpolla (25km of river frontage) and from Nichols Point to Colignan (90km of river frontage). Another key achievement was the rationalisation of over 20km of non-arterial user-made tracks by installing 1.7km of bollards at strategic locations as part of the Mallee CMA's flagship waterway project 'There's nothing common about Merbein Common'. These works are supporting currently degraded areas of the floodplain, consisting of bare ground, to naturally regenerate with native vegetation. 	<ul style="list-style-type: none"> 12 visitor facilities installed including car park upgrades, walking tracks, picnic areas, and interpretative signs.  <p>Access track upgrades and track rationalisation at Cowanna Bend.</p>
Our Catchments Our Communities	The Our Catchments, Our Communities Program is supported by the Mallee CMA, through funding from the Victorian Government. Works are focused on enhancing the ecological function of priority waterways through integrated catchment management.	
	<ul style="list-style-type: none"> 95ha of native vegetation established to form a roadside wildlife corridor between Tyrrell and Lalbert Creeks. 6 natural ground features (hollow log structures) were placed along this corridor to create additional habitat for native wildlife, and a further 3ha established by Tchum Lake South Aquatic Club to improve habitat connectivity. 1,261ha of weed control and 2,808ha of pest animal control completed to protect/enhance priority riparian habitat (i.e. Lake Tyrrell, Tyrrell Creek, Lalbert Creek, and dispersed wetlands). 25km of exclusion fencing installed and/or maintained by private land managers along Tyrrell and Lalbert creeks. 3km of road/track rationalisation and repair works, including upgrading and extending walking track at Cokum Bushland Reserve. 12 visitor facilities installed including interpretive signs, picnic tables/benches, shade sheds, and car park facility upgrades. 	 <p>Shade shed installed at Cokum Bushland.</p>  <p>Revegetation at Tchum Lake South Reserve.</p>

Continued...

Table 7 | Key outputs delivered under government programs/initiatives contributing to the achievement of 2018-19 priority 'Waterway' activities and associated performance targets. *Continued...*

Program/Initiative	Key 2018-19 outputs and achievements	
Environmental Water Program	Projects including Environmental Watering Reserve Officers, Community Engagement and Shared Benefits are supported by the Mallee CMA, through funding from the Victorian Government's Environmental Water Program. Works are focused on the delivery of appropriate water regimes to enhance the environmental and social values of priority waterways.	
	<ul style="list-style-type: none"> • 4 Seasonal Watering Proposals developed and agreed upon by key project stakeholders (i.e. the VEW, Parks Victoria (PV) and the Department of Environment, Land, Water, and Planning (DELWP)). These cover priority waterways within the Hattah Lakes, Lower Murray Wetlands, Wimmera Mallee Pipeline Wetlands, and Lindsay, Wallpolla, and Mulcra areas. • 48 sites with changed water regimes, with seven wetlands receiving water from temporary pumps over 10 pumping events; 32 wetlands receiving water from the Wimmera-Mallee Pipeline, and three sites managed by operating regulator structures to introduce drying phases to Butlers Creek, Ducksfoot Lagoon and Cowanna Billabong. These events delivered 5,467 ML of environmental water to 559 ha of priority waterways • 120,000 golden and silver perch released into Wallpolla Horseshoe Lagoon, an ideal nursery habitat for the native fish fingerlings after the wetland was dried last year eliminating adult carp from the wetland. The released fish will remain in Wallpolla Horseshoe for approximately 12-18 months with the intention of cueing them out in the future to return to the Murray River. This technique of stocking native fish into a newly inundated wetland is considered an innovative approach to managing fish releases and could foster alternative methods for the rejuvenation of fish stocks at other wetlands across the Mallee. The fish release was a joint initiative of the Mallee CMA, along with Victorian Fisheries and other project partners. • 3 evaluation surveys undertaken with community members to identify how they used their local waterways, with the 2018-19 focus being to understand sites being used by recreational anglers. 	<ul style="list-style-type: none"> • Survey results shared through short videos and articles for local newspapers. • Partnerships developed with tourism groups such as Murray Off-road Adventures, Houseboats Mildura, Mildura, and Swan Hill information centres to support the promotion of both the environmental and recreational benefits of environmental watering.
Natural Disaster Relief and Recovery Arrangements (Flood Recovery).	Mallee CMA, through funding from the Victorian Government, is implementing the Victorian Flood Recovery Program for the repair/ replacement of infrastructure impacted by 2016 flood event.	
	<ul style="list-style-type: none"> • 1 visitor facility repaired through works on car parking facilities at Boundary Bend. 	<ul style="list-style-type: none"> • 1.7km of road/track repair works. • 3 culvert repair works.



Native fish release at Wallpolla Horseshoe Lagoon.



Canoeing at Vinifera creek.



An area of revegetation and mulching at Merbein Common.



Completed walking track with swale drainage at Merbein Common.

Theme: Biodiversity

The Mallee supports a diverse and unique range of flora and fauna. Several species occur here which are found nowhere else in Victoria, and many others are genetically distinct from their northern or southern relatives. This includes 27 species and 4 communities listed as threatened at the federal level (i.e. EPBC Act); and 133 species and 6 communities listed at the state level (i.e. FFG Act).

Native vegetation across the Mallee once covered some 3,919,887ha, of which 52% is estimated to have been cleared. Much of the region's remaining vegetation has been reserved in large parks such as Murray-Sunset, Big Desert, Wyperfeld and Hattah-Kulkyne National Parks, extensive tracts of riverine and dryland state forests, and over 500 small reserves scattered throughout the agricultural area. These areas of public land are particularly significant given the largely cleared and fragmented agricultural landscape in which they occur. Remnants on private land, and the roadsides and rail reserves dissecting this land, also represent significant areas of our native vegetation. They are of particular importance for the threatened flora they contain and for the connectivity opportunities they provide to our region's fauna.

Historic native vegetation removal and associated habitat loss and fragmentation makes much of the region's biodiversity vulnerable to a range of threatening processes. This can include invasive plants and animals, inappropriate fire regimes, constrained regenerative capacity, recreational pressures and land-use change. By working with our community and delivery partners to address these key threats, the Mallee CMA is seeking to deliver against the following Biodiversity related outcomes:

- The viability of targeted threatened species and communities is being protected and enhanced
- The ecosystem services provided by targeted terrestrial habitat are being protected and enhanced.

Delivery against these stated outcomes will also contribute to achieving priorities established by key policy and strategic frameworks, including:

- Protecting Victoria's Environment – Biodiversity 2037 (2017)
- Australian Government's Threatened Species Strategy (2015-20)
- Commonwealth and Victorian Recovery Plans/Action Statements for target threatened species and communities
- Mallee Biolinks Plan (2016-19).

Progress against these strategic outcomes is measured through organisational performance against three key indicators (see Table 8).

Delivery of over 1.3 million ha and 230km of environmental works over the 2015-2019 reporting period represents significant progress against Federal,

State and regional targets for Mallee Biodiversity. This includes the re-establishment or enhancement of priority habitat through tubestock planting and direct seeding; targeted pest plant and animal control to rescue completion, grazing and predation impacts; and stock exclusion fencing to protect priority remnants from overgrazing.

The area of priority pest plant and animal control increased significantly in 2017-18 with the commencement of the State Government's Threatened Species Initiative. This program is delivering against actions identified by the Victorian Biodiversity Strategy (Protecting Victoria's Environment – Biodiversity 2037) as being a priority for the Mallee to support the recovery of 19 threatened species (e.g. Mallee Emu-wren, Regent Parrot, Malleefowl, Carpet Python, Mallee Worm Lizard, Yellow Swainson-pea) and 4 threatened ecological communities (e.g. Buloke Woodlands, Mallee Bird Community) across eight priority landscapes.

Funding was also secured in 2018-19 to deliver against the National Landcare Program (NLP Phase 2) priorities for threatened species and threatened ecological communities. Targeting delivery to improve the connectivity of critical Malleefowl habitat and to support the recovery of Buloke Woodlands in the southern Mallee is building on the outcomes achieved under previous (2013-18) NLP funding.

Further detail on Biodiversity condition benchmarks, medium-term trends, and the expected contribution of activities delivered 2018-19 is provided in the Biodiversity section of the Condition and Management Report.

Activity Indicators and Performance Measures

Performance against the organisations 2018-19 priority activities for progressing Biodiversity outcomes, including actual delivery against budgeted targets are provided in Table 9. Overall, 100% of performance targets were achieved or exceeded over the reporting period.

Key initiatives and projects

Initiatives which supported the Mallee CMA to deliver against their stated priority activities and associated performance targets in 2018-19 included both State and Commonwealth funded programs. An overview of their contribution in relation to Biodiversity is provided in Table 10.

Table 8 | Progress against performance measures for Biodiversity outcome indicators.

Outcome Indicators	Performance measures	Unit of measure	2015–16	2016–17	2017–18	2018–19
Reduced impact of targeted invasive flora and fauna species	Habitat treated for priority pest animal species	hectares	66,972	93,008	457,370	327,306
	Habitat treated for priority weed species	hectares	41,338	48,251	158,882	123,756
Increased diversity, extent and ecological connectivity of priority habitat (terrestrial)	Native vegetation established	hectares	280	609	269	463
Increased distribution and extent of targeted threatened species and communities	Exclusion fencing installed	kilometres	79	95	31	25

Table 9 | Performance against 2018-19 Biodiversity activity measures.

Activity Indicators	Performance measures	Unit of measure	2018–19 actual	2018–19 target	Performance variation (%)	Result
Support implementation of Victoria's strategic plan for valuing and managing biodiversity into the future, Protecting Victoria's Environment – Biodiversity 2037 (2017); by delivering against actions identified as a priority for the Mallee.	Habitat treated for priority pest animal species	hectares	327,306	304,891	7	✓
	Habitat treated for priority weed species	hectares	123,756	116,963	6	✓
	Native vegetation established	hectares	463	452	2	✓
	Exclusion fencing installed	kilometres	25	25	0	✓
Align the delivery of threatened species and communities programs with associated Action Statements and Recovery Plans.	Threatened flora species targeted by works programs to deliver against associated Action Statement/Recovery Plan	number	3	3	0	✓
	Threatened fauna species targeted by works programs to deliver against associated Action Statement/Recovery Plan	number	18	18	0	✓
	Threatened ecological communities targeted by works programs to deliver against associated Action Statement/ Recovery Plan	number	4	4	0	✓
Support implementation of Australian Government's Threatened Species Strategy (2015-20); by delivering against species and actions identified as a priority for the Mallee.	Threatened species identified as a priority for the Mallee targeted by works programs.	percent	75	75	0	✓
Implement priority actions established by the Mallee Biolinks Plan.	Priority corridors managed to support habitat connectivity outcomes.	percent	100	100	0	✓

Table 10 | Key outputs delivered under government programs/initiatives contributing to the achievement of 2018-19 priority 'Biodiversity activities and associated performance targets.

Program/Initiative	Key 2018-19 outputs and achievements
Threatened Species Initiative	<p>Biodiversity On-ground Actions and Biodiversity Response Planning projects are delivered by the Mallee CMA, through funding from the Victorian Government to progress implementation of the Victorian Biodiversity Strategy.</p> <p>Delivery against actions identified by State Biodiversity Strategy (Protecting Victoria's Environment – Biodiversity 2037) as being a priority for the Mallee. Targeted works implemented to support the recovery of 19 threatened species (e.g. Mallee Emu-wren, Regent Parrot, Malleefowl, Carpet Python, Mallee Worm Lizard, Yellow Swainson-pea) and 4 threatened ecological communities (e.g. Buloke Woodlands, Mallee Bird Community) across eight priority landscapes:</p> <ul style="list-style-type: none"> • North West Woodlands • Wyperfeld Dunefields • Avoca Basin Terminal Lakes System and Creeklines • Cardross Lakes • Murray River Floodplain: Nyah to Robinvale • Hattah-Kulkyne Lakes System & National Park • Pink Lakes • Annuello <p>Key 2018-19 activities delivered in partnership with land managers and community groups included:</p> <ul style="list-style-type: none"> • 184ha of native vegetation planted to re-establish critical habitat within the Cardross target area. • 105,582ha of habitat managed for priority weeds (e.g. boxthorn, cactus, bridal creeper, silver-leaf nightshade). • 247,330ha of habitat managed for priority pest animals to support reduced grazing, disturbance and predation outcomes (i.e. rabbits, feral goats, feral pigs, foxes, and feral cats). This included a targeted fox control program delivered in partnership with private land managers in the Wyperfeld area to reduce predation on priority species (e.g. Malleefowl). • 3km of stock exclusion fencing installed by private land managers to reduce grazing impacts and support the regeneration of critical habitat.



Cactus control program.




Stock exclusion fencing reduces grazing impacts.

Continued...



Feral cats represent a major threat to our threatened bird species.

Table 10 | Key outputs delivered under government programs/initiatives contributing to the achievement of 2018-19 priority 'Biodiversity activities and associated performance targets. *Continued...*

Program/Initiative	Key 2018-19 outputs and achievements	
National Landcare Program	Regional Land Partnership Threatened Species Services and Threatened Ecological Community Services are supported by the Mallee CMA through funding provided by the Australian Government's National Landcare Program to progress delivery of their Threatened Species Strategy (2015-20) and National Recovery Plans.	
	<p>Funding secured under the Federal Government's Regional Land Partnerships Program 'Threatened Species' and 'Threatened Communities' Services delivers against priority actions for the Mallee identified by the Australian Government's Threatened Species Strategy (2015-20). Targeted works implemented in partnership with land managers and community groups to support the recovery of two threatened species (Malleefowl, Plains-wanderer) included:</p> <ul style="list-style-type: none"> • 33ha of additional Malleefowl corridors established through revegetation (tubestock and direct seeding) and stock exclusion fencing (12km). • 50ha of existing Malleefowl habitat enhanced through supplementary planting (tubestock) of indigenous species. • 28,757ha of critical Malleefowl habitat managed for rabbits and feral goats to reduce grazing impacts and support regeneration outcomes. • 13,800ha of critical Malleefowl habitat managed for Weeds of National Significance (e.g. boneseed, boxthorn, bridal creeper). • 14,957ha of targeted fox control delivered in partnership with National Malleefowl Recovery Group as part of the national Adaptive Management Predator Experiment. • Plains-wanderer habitat identified and surveyed for species presence through a partnership with Birchip Landcare Group and Trust for Nature. 	<p>Delivery against priority actions identified by the National Recovery Plan for Buloke Woodlands progressed through the implementation of works programs within the Avoca Basin and Yarriambiack target areas:</p> <ul style="list-style-type: none"> • 60ha of priority remnants enhanced by supplementary planting (tubestock and direct seeding) to support recruitment and condition outcomes. • 570ha managed for Weeds of National Significance (e.g. Boxthorn, Bridal Creeper, Hudsons Pear) to reduce competition. • 2,500ha managed for rabbits to reduce grazing impacts and promote regeneration. • 5km of stock exclusion fencing installed by private land managers, protecting 200ha of high-value remnants from over-grazing.  <p>Revegetation at Hopetoun.</p>
Victorian Environmental Partnerships Program	Northern Mallee Bush Tender program being delivered by the Mallee CMA through funding provided by the Victorian Government to support the protection and enhancement of priority habitat on private land.	
	<p>In 2018-19 tender participants delivered the following actions within high-value remnants of native vegetation:</p> <ul style="list-style-type: none"> • 5km of stock exclusion works • 127ha of revegetation • 2,722ha of targeted weed control works • 2,277ha of rabbit control. 	



Native vegetation planting at Patchewollock.

Theme: Land

Despite the semi-arid nature of the region, the predominance of winter rainfall and access to reliable water from the Murray River has allowed the Mallee to develop into an agriculturally diverse region, with important irrigation areas in the north along the Murray, and extensive dryland cropping and grazing areas in the south, east and west. In total, some 62% of the region's area is given over to agricultural production.

The productive capacity of our agricultural lands rose steadily over the last half of the 20th century in response to increased mechanisation, improved management techniques, and genetic improvement of crops. Today, agriculture remains our major land use and most economically important industry. Dryland farming in the region covers some 2.4 million hectares and includes the cropping of a wide variety of cereals, pulse and oilseed crops such as wheat, barley, vetch, lupins, and canola.

The productivity of our agricultural lands is, however, vulnerable to a number of processes and management practices (both historical and current), which play a major role in determining the impact of threats such as salinity, erosion, and invasive plants and animals. If not managed appropriately, these processes have the potential to degrade our agricultural land and to potentially reduce the area available for production into the future.

By continuing to work with regional delivery partners, the Mallee CMA is seeking to support irrigators and dryland farmers to deliver against the following Land related outcome:

- Management practices are being implemented to optimise the productive capacity of agricultural land while protecting associated natural values.

Delivery against this stated outcome will also contribute to achieving priorities established by key policy and strategic frameworks, including:

- Mallee Dryland Sustainable Agriculture Strategy (2017-23)
- Victorian Mallee Irrigation Region Land and Water Management Plan (2011)
- Water for Victoria (2016)
- Basin Salinity Management 2030 Strategy
- Ministerial Expectations for 'Water for Agriculture' (2018-19)

Outcome Indicators and Performance Measures

Progress against strategic outcomes is measured through organisational performance against six key indicators (see Table 11); three of which relate to irrigated land, and three to dryland agriculture.

Irrigated land

Ongoing delivery of the Mallee Irrigation Incentive Program (MIIP) in partnership with Agriculture Victoria has continued to provide an effective mechanism by which to promote sustainable irrigation management practices and support the growth and viability of regional communities. The MIIP represents an integrated package of measures to encourage improved planning and management of irrigation and drainage systems. It provides financial assistance for improved irrigation management, for system upgrades, for skills development and planning at the farm level. All financial incentives are based on cost-sharing arrangements between the MIIP and irrigators and are supported by two separate initiatives.

Incentives funded under the Victorian Sustainable Irrigation Program focus on supporting on-farm works and measures to improve irrigation management and water efficiency. Salinity impact offset charges collected by water authorities are managed under the Mallee Salinity Investment Plan and support the implementation of works which will secure future salinity benefits by reducing salt loads to the Murray River. Over the 2015-19 reporting period, these two programs have collectively improved 2,728ha of irrigation infrastructure, encompassing 1,083ha of irrigation upgrades/conversions and 1,045ha of scheduling equipment installed. The water use efficiency gains achieved by these works is estimated to be 5,123 ML. With salinity benefits estimated to be a 11,740 tonnes/year reduction in salt to the Murray River.

Dryland agriculture

Mallee CMA delivery against dryland agriculture outcomes is primarily funded under the Commonwealth's National Landcare Program (NLP). The completion of Phase 1 (2013-18) of this initiative and the commencement of Phase 2 in 2018-19 has seen a key change in the delivery mechanisms being applied to achieve both investor and regional priorities. The NLP Regional Land Partnerships funding stream identified activities supporting increased groundcover (and reducing wind erosion) and soil organic carbon as investment priorities for the Victorian Mallee. The provision of incentives to private land managers to undertake associated threat mitigation works was not however eligible under the program, meaning that support for actions such as dune reclamation, stock containment, and discharge management was not provided in 2018-19. It is noted however that Agriculture Victoria continued to fund the establishment of stock containment areas in 2018-19 as part of their dry seasonal conditions support package.

In response to these changes, the Mallee CMA's NLP Phase 2 funded Soils program is focusing on building the awareness, knowledge, and skills of land managers in relation to implementing improved management practices (as reported under Objective 1 - Community

capacity for NRM of this performance report). The delivery of on-ground research and development sites to identify, validate and promote improved management practices will also re-commence in 2019-20 to further support these outcomes.

The Mallee Dryland Sustainable Agriculture Strategy (2017-23) establishes a groundcover target of >50% to minimise the risk of wind erosion across the region's cropping areas. Performance against this target is reported annually in March, which represents a period of high erosion risk. Between 71% and 95% of the region achieved this target over the 2015-19 reporting period. The low (71%) figure reported for 2018-19 is largely a response to the well below average rainfall levels experienced across the region over an extended period, rather than any indication of widespread returns to inappropriate land management practices.

Further detail on Land condition benchmarks, medium-term trends, and the expected contribution of activities delivered 2018-19 is provided in the Land section of the Condition and Management Report.

Activity Indicators and Performance Measures

Performance against the organisations 2018-19 priority activities for progressing Land outcomes, including actual delivery against budgeted targets are provided in Table 11.

Irrigated land

Irrigation infrastructure improvements delivered under the Sustainable Irrigation Program (i.e. delivering against Victorian Mallee Irrigation Region Land and Water Management Plan priorities) significantly exceeded 2018-19 targets. This was primarily a result of the uncharacteristically large areas being managed by several of the successful incentives applicants. Conversely, the area achieved in 2018-19 under Salinity Investment Plan funded incentives was less than anticipated due to several planned works not being completed within planned timeframes. Extended harvest periods (i.e. table grape harvesting still occurring throughout June) has required the provision of time extensions to associated growers, with all remaining outputs now scheduled to be delivered by December 2019.

Three of the region's four accountable action reviews progressed as per BSM2030 Register requirements in 2018-19, with the review of the Mallee Drainage Bore Decommissioning Accountable Action endorsed for lodgement with the Basin Salinity Management Advisory Panel and processes established with key stakeholders for progressing the two Legacy of History (Dryland Clearance and Irrigation Development) Accountable Action Reviews. The fourth Nyah to SA Border Salinity Management Plan (N2B SMP) Accountable Action review is predicated upon accreditation of upgraded numerical models in development under the Model Refinement

Project (MRP). These revised models underpin estimation of salinity impact for private diversion development in the Victorian Mallee or the area covered by the N2B SMP Accountable Action. It is anticipated that accreditation of these upgraded models will occur in 2019-20, enabling progress against the action to commence.

Improvements in the strategic and policy frameworks informing the delivery of sustainable irrigation and salinity management activities have also been significantly progressed by the implementation of 2018-19 priority actions, specifically:

- Review and renewal of the 2011 Victorian Mallee Irrigation Region Land and Water Management Plan are nearing completion, with a public consultation draft expected to be released in early 2019-20.
- Ongoing review and refinement of salinity management policy in response to emerging issues to deliver against Water for Victoria Action 4.8 (i.e. improve salinity management in the Mallee). In 2018-19 this has included completion of Phase 1 of a salinity charges review and reviewing policies for the region's high impact zone to support the modernisation of the Sunraysia Irrigation district.

Dryland agriculture

Performance against the organisations 2018-19 priority activities for progressing Dryland Agriculture outcomes, including actual delivery against budgeted targets are provided in Table 12. Overall, 100% of performance targets were achieved, with 2018-19 activities focusing on enhancing stakeholder capacity to deliver against groundcover and soil organic carbon outcomes.

Key initiatives and projects

Initiatives which supported the Mallee CMA to deliver against their stated priority activities and associated performance targets in 2018-19 included State, Commonwealth and regionally funded programs. An overview of their contribution in relation to Land management is provided in Table 13.

Table 11 | Progress against performance measures for Land strategic outcome indicators.

Outcome Indicators	Performance measures	Unit of measure	2015–16	2016–17	2017–18	2018–19
Irrigated Land						
Increased productivity	Irrigation infrastructure upgrades/ conversions	hectares	632	193	276	582
Reduced drainage outfalls	Irrigation scheduling equipment installed	hectares	506	161	196	182
Reduced groundwater levels	Estimated water use efficiency (WUE) gains achieved by works.	ML	1,596	1,292	1,199	1,036
	Estimated salinity benefits (i.e. reduced irrigation recharge) achieved by works.	tonnes/year reduction in salt to Murray River	2,546	3,112	2,770	3,312
Dryland Agriculture						
Increased productivity	On-ground research & development sites managed to identify, validate and promote improved management practices.	number	9	10	10	0
Increased soil health						
Increased groundcover	Stock containment areas established	number	34	53	26	0
	Sand dunes reclaimed	number	22	11	26	0
	Vegetation (non-indigenous) established for salinity management	hectares	57	39	95	0
	Proportion of the Mallee with more than 50% groundcover in March.	percent	88	95	95	71



Increased productivity with irrigation infrastructure upgrades.

Table 12 | Performance against 2018-19 Land activity measures.








Activity Indicators	Performance measures	Unit of measure	2018-19 actual	2018-19 target	Performance variation (%)	Result
Irrigated Land						
Implement priority actions established by the Victorian Mallee Irrigation Region Land and Water Management Plan	Irrigation infrastructure upgrades/ conversions	hectares	550	51	1,257	
	Irrigation scheduling equipment installed	hectares	142			
Implement priorities established by the Mallee's Salinity Investment Plan to offset the salinity impact of new irrigation development between Nyah and the South Australian border	Irrigation infrastructure upgrades/ conversions	hectares	32	106	-32	
	Irrigation scheduling equipment installed	hectares	40			
Support implementation and reporting of Victoria's salinity impact obligations under the Basin Salinity Management 2030 Strategy	Compliance with DELWP guidelines for Annual BSM2030 Implementation Report	percent	100	100	0	
	Accountable action reviews progressed as per BSM2030 Register	number	3	4	-25	
Support implementation of Victoria's strategic plan for managing water resources into the future, Water for Victoria (2016); by supporting delivery against irrigation and salinity management actions identified as a priority for the Mallee	Actions identified as a priority for the Mallee implemented as per government requirements	percent	100	100	0	
Dryland Agriculture						
Implement priority actions established by the Mallee Dryland Sustainable Agriculture Strategy (2017-23)	Targeted extension programs delivered to promote sustainable agricultural production systems and improved management practices	number	2	2	0	
	Monitoring programs delivered for improved understanding of spatial/temporal variability in land management practices and associated soil health impacts.	number	2	2	0	

Table 13 | Key outputs delivered under government programs/initiatives contributing to the achievement of 2018-19 priority 'Land' activities and associated performance targets.

Program/Initiative	Key 2018-19 outputs and achievements	
Sustainable Irrigation Program	<p>Implementation of the Victorian Mallee Irrigation Region Land and Water Management Plan project is supported by the Mallee CMA, through funding from the Victorian Government's Sustainable Irrigation Program.</p>	
	<ul style="list-style-type: none"> Ongoing delivery of Mallee Irrigation Incentives program in partnership with Agriculture Victoria. These incentives supported 18 works projects to be undertaken by irrigators for improved on-farm water use efficiency and subsequent reductions in groundwater accessions. They delivered 550ha of irrigation infrastructure upgrades, 71ha of systems checks, water use monitoring equipment across 142ha, and irrigation drainage management plans for 14ha. Ongoing coordination and communication of the Seasonal Annual Use Limit (SAUL) adjustment process. Report detailing the annual implementation of BSM2030 in the Mallee region prepared and submitted as per government requirements; with the salinity impact of irrigation development for Nyah to SA Border SMP estimated to have increased by 0.40 EC to account for irrigation development in 2017-18. No change was determined for the Nangiloc-Colignan SMP, bringing the total Mallee salinity credit uptake to 17.7EC as of June 2018; within the 20.62EC salinity credit allocations for these areas. 	<ul style="list-style-type: none"> Review of the Mallee Drainage Bore Decommissioning Accountable Action endorsed for lodgement with the Basin Salinity Management Advisory Panel. Process established with key stakeholders for progressing the two Legacy of History (Dryland Clearance and Irrigation Development) Accountable Action Reviews. Implementation of recommendations arising from previous five-year reviews of accountable actions (e.g. the Psyche Bend Lagoon, Lambert Swamp and Sunraysia Drying of the Drains Accountable Action Reviews were endorsed by BSMAP in October 2017) included an audit of irrigation drainage sites and associated monitoring programs.
Mallee Salinity Investment Plan	<p>Activities delivered by projects funded from Salinity Offsetting Charges and the Salinity Offset Levy, (collected specifically to offset salinity impact of irrigation development from Nyah to the South Australian Border).</p>	
	<ul style="list-style-type: none"> Ongoing delivery of the Mallee irrigation incentives program for salinity benefit in 2018-19 supported the implementation of 31 individual works projects, delivering: 32ha of irrigation system upgrades, 1,000ha of systems checks, water use monitoring equipment installed across 40ha, and irrigation drainage management plans developed for 9ha. Collectively the salinity benefits (i.e. reduced irrigation recharge) achieved by these works is estimated to be a 3,312 tonnes/year reduction in salt to the Murray River. Significant progress against Water for Victoria Action 4.8 (i.e. improve salinity management in the Mallee) achieved through the delivery of key regional studies and reviews. These include model refinement to improve the estimation of salinity impacts incurred by irrigation, undertaking an independent salinity charges pricing, and reviewing policies for the high impact zone to support the modernisation of the Sunraysia Irrigation district. 	<ul style="list-style-type: none"> Implementation of comprehensive groundwater bore asset reconditioning/replacement program to ensure the integrity of associated monitoring/modeling requirements. Commencing an assessment of salt accumulation on the floodplain and associated environmental risks/management options. Progressing satellite-based estimations of crop water use and root zone drainage (RZD), enhancing stakeholder understanding of the interactions between RZD and irrigation inputs, crop type, climate etc.
National Landcare Program	<p>Regional Land Partnership Soils Services are supported by the Mallee CMA through funding provided by the Australian Government's National Landcare Program.</p>	
	<p>Funding secured in 2018-19 under the Federal Government's Regional Land Program 'Soils Services' delivers against their stated priorities for wind erosion and soil organic carbon. Targeted programs implemented in partnership with Agriculture Victoria, Birchip Cropping Group, and Mallee Sustainable Farming included:</p> <ul style="list-style-type: none"> Targeted communication/engagement activities to improve awareness (and ultimately adoption) of alternative farming systems which have the potential to significantly enhance groundcover levels in the northern Mallee. Utilising existing research trial sites, delivery-focused sharing results/interpretations; identifying new/emerging risks and appropriate responses, and validation of key barriers/drivers of change. Increasing awareness of farm practices influencing soil carbon by identifying specific issues around awareness/adoption of relevant management practices and applying new decision support tools (e.g. Yield Prophet) to effectively communicate associated impacts on production/profitability. 	<ul style="list-style-type: none"> Developing a revised Mallee Soil Erosion and Land Use Monitoring Framework to delivers against federal/state/regional MER requirements. Supporting the maintenance and data collection/collation requirements of two DustWatch nodes located within the region (Walpeup and Werrimull). The data generated is utilised by the national monitoring framework which produces monthly reports on wind erosion indicators such as dust activity/ground cover at a range of scales.

Theme: Culture & Heritage

The Mallee has been occupied for thousands of generations by Aboriginal people with human activity dated as far back as 33,500 years ago. The region's rich and diverse Aboriginal heritage has been formed through the historical and spiritual significance of sites associated with this habitation, together with the strong connection Traditional Owners continue to have with the Mallee's natural landscapes.

Aboriginal cultural heritage is inextricably connected to our natural landscapes and as such is vulnerable to the same suite of threatening processes (e.g. altered hydrological regimes, soil erosion). Efforts to protect our natural values from these threats can however also pose significant risks to cultural sites, particularly where soil disturbance is required (e.g. built infrastructure, invasive species management, and revegetation).

The *Aboriginal Heritage Amendment Act 2016* (the Amendment Act) established new provisions and changes to the *Aboriginal Heritage Act 2006*. The Act provides for the protection of (or minimisation of harm to) Aboriginal cultural heritage in Victoria. Aboriginal cultural heritage is protected by law, regardless of the land tenure of the sites where the cultural heritage is located.

In delivering against our cultural heritage management responsibilities over the next five years, the Mallee CMA will continue to work with regional partners and local stakeholders to deliver against the following outcome:

- Cultural heritage sites are being recognised and protected as an integral component of all land, water, and biodiversity management processes.

Delivery against this stated outcome will also contribute to achieving priorities established by key policy and strategic frameworks, including:

- *Aboriginal Heritage Amendment Act 2016*
- Mallee CMA Cultural Heritage Assessment Policy (2016)
- Mallee Indigenous Ecological Knowledge Guidelines (2016)
- DELWP Aboriginal Inclusion Plan: Munganin – Gadhaba (2016-20)
- Aboriginal Participation Guidelines for Victorian Catchment Management Authorities (2016)
- Mallee CMA Indigenous Participation Plan (2016).

Outcome Indicators and Performance Measures

Progress against these strategic outcomes is measured through organisational performance against three key indicators (see Table 14).

Since records commenced in 2016, the Mallee CMA has undertaken over 300 cultural heritage assessments at proposed works sites. These assessments have been delivered across all areas of the organisation's on-ground

works programs (i.e. land, water, and biodiversity) as required by the Mallee CMA Aboriginal Cultural Heritage Compliance Policy (2016); ensuring that all obligations set out by the *Aboriginal Heritage Amendment Act 2016* are met. While only limited records exist in regards to the number of formal Cultural Heritage Management Plans (CHMPs) that have been developed, approved, and lodged by MCMA with Aboriginal Victoria (AV); it is evident that these can vary in both number and area in any given year depending on the scale and type of works being implemented.

It is assumed that a site listed on a relevant heritage register is afforded some level of protection, and similarly, sites captured within a CHMP are protected through associated threat/risk mitigation activities. This assumption is applied in determining progress against the organisations stated outcome for Culture and Heritage. Mallee CMA cultural heritage assessment and CHMP processes require that the location of any new (i.e. unregistered) sites identified as part of on-site inspections are provided to AV for inclusion on the Aboriginal Cultural Heritage Register and Information System (ACHRIS) database. While records are not kept in regards to the number of sites specifically provided by the Mallee CMA, performance at a regional scale is demonstrated by the total number of additional Aboriginal places and individual components registered in ACHRIS; which since 2016 has been 71 and 352 respectively.

Further detail on Culture and Heritage condition benchmarks, medium-term trends, and the expected contribution of activities delivered 2018-19 is provided in the Culture and Heritage section of the Condition and Management Report.

Activity Indicators and Performance Measures

Performance against the organisations 2018-19 priority activities for progressing Culture and Heritage outcomes, including actual delivery against budgeted targets are provided in Table 15. Overall, three of the four performance targets were achieved or exceeded over the reporting period.

In regards to the CHMP target, seven were approved and lodged with AV to support the delivery of works programs across several riparian areas including Cowanna Bend, Merbein Common, Kings Billabong, Burra and Tata Wetlands, Hattah and Karadoc Wetlands, Cokum Bushland Reserve, and Lake Maribed. Works included carpark upgrades, road capping works, and walking tracks. Progressing two CHMP's required for the delivery of works at Karadoc and Utiwillock wetland took longer than planned however due to delays in finalising land manager approvals. It is anticipated that both plans will be approved and lodged with AV in early 2019-20.

Key initiatives and projects

Initiatives which supported the Mallee CMA to deliver against their stated priority activities and associated performance targets in 2018-19 included both State and Commonwealth funded programs. An overview of their contribution in relation to Culture and Heritage management is provided in Table 16.

Table 14 | Progress against performance measures for Culture and Heritage strategic outcome indicators.

Outcome Indicators	Performance measures	Unit of measure	2015-16	2016-17	2017-18	2018-19
Increased number of Cultural Heritage assessments	Cultural heritage assessments supported by MCMA at proposed works sites	number	N/a	51	113	144
Increased number/area of Cultural Heritage Management Plans (CHMPs)	CHMPs approved and lodged by MCMA with Aboriginal Victoria.	number	N/a	N/a	5	7
		area	N/a	N/a	17,916	300
Increased number of registered Aboriginal features and places	Registered Aboriginal Places (ACHRIS)	number	N/a	4,274	4,334	4,345
	Components Recorded (ACHRIS)	number	N/a	5,679	5,832	6,031

Table 15 | Performance against 2018-19 Culture and Heritage activity measures.

Activity Indicators	Performance measures	Unit of measure	2018-19 actual	2018-19 target	Performance variation (%)	Result
Implement all activities in line with the Mallee CMA Aboriginal Cultural Heritage Compliance Policy (2016) to ensure that all obligations set out by the <i>Aboriginal Heritage Amendment Act 2016</i> are met.	Non-compliance reports registered	number	0	0	0	✓
Provide opportunities for Aboriginal people to be involved in cultural heritage assessments to build practical archaeological skills, facilitate connections with Country, and promote Indigenous ecological knowledge.	Cultural heritage assessments engaging and/or employing Aboriginal people.	percent	100	100	0	✓
Provide the location of any new (i.e. unregistered) sites identified as part of on-site inspections to AV for inclusion on the Aboriginal Cultural Heritage Register and Information System (ACHRIS) database.	Cultural heritage assessments undertaken at proposed works sites	number	144	115	25	✓
	CHMPs approved and lodged with Aboriginal Victoria	number	7	9	-22	■

Table 16 | Key outputs delivered under government programs/initiatives contributing to the achievement of 2018-19 priority 'Culture and Heritage' activities and associated performance targets.

Program/Initiative	Key 2018-19 outputs and achievements
Waterway Health Program	<p>Projects including the Regional Riparian Action Plan (RRAP), On-Ground Works, Water Statutory Functions, and Ramsar Management are supported by the Mallee CMA, through funding from the Victorian Government's Waterway Health Program. Works are targeted to priority waterways with the objective of improving associated riparian values.</p> <p>3 Cultural Heritage Management Plans lodged: Cowanna Bend/Merbein Common, Chaffey Landing (45 ha), and Kings Billabong (0.45 ha).</p>
Natural Disaster Relief and Recovery Arrangements (Flood Recovery).	<p>Mallee CMA, through funding from the Victorian Government, is implementing the Victorian Flood Recovery Program for the repair/ replacement of infrastructure impacted by the 2016 flood event.</p> <p>2 Cultural Heritage Management Plans lodged: Burra - Tata Wetlands complex sites (0.18 ha), and Hattah – Karadoc complex sites (0.27 ha).</p>
Our Catchments Our Communities	<p>The Our Catchments, Our Communities Program is supported by the Mallee CMA, through funding from the Victorian Government. Works are focused on enhancing the ecological function of priority waterways through integrated catchment management.</p> <p>2 Cultural Heritage Management Plans lodged: Cokum Bushland Reserve (23ha), and Lake Maribed (234 ha).</p>
Across all Programs	<p>All 2018-19 funding initiatives delivering on-ground works programs have contributed to the delivery of 144 cultural heritage assessments undertaken at proposed works sites.</p> <p>Through these programs, the Mallee CMA also developed a unique method of bollard installation to eliminate ground disturbance, known as a 'cultural bollard'. The traditional method of digging a hole and concreting a bollard would trigger a CHMP in culturally sensitive areas, 200m either side of a known or historical waterway. The new method involves securing bollards into robust precast concrete slabs which are placed on the ground. In consultation with Traditional Owners, Mallee CMA eliminates ground disturbance using these bollards in sensitive locations to ensure the protection of cultural heritage.</p>



Karadoc bollard installation works - using bollards secured into precast concrete slab ensures no ground disturbance is required for culturally sensitive areas.

Business
Objective **3**

Strengthen our capacity to operate as a corporately and socially responsible organisation.

Governance & Compliance

As a statutory authority, the Mallee CMA has clear duties and accountabilities set out in legislation. The Statement of Obligations for the *Catchment and Land Protection Act 1994* (CaLP) and the *Water Act 1989*, the *Public Administration Act 2004*, the *Financial Management Act 1994*, and the Mallee CMA's Board Charter of Corporate Governance all provide guidance for the Authority in relation to its governance requirements.

In delivering against these requirements, the Mallee CMA is committed to a high level of corporate governance and to fostering a culture that values ethical behaviour, integrity, and respect. The Mallee CMA Board believes adopting and operating in accordance with high standards of corporate governance is essential for sustainable long-term performance and achievement of priority NRM outcomes.

The Mallee CMA is also committed to building a diverse workforce and a culture of inclusion in all areas of our business by valuing social and professional identity, alternative thoughts, backgrounds, experiences, uniqueness, and creativity.

By continuing to focus on strong governance and sustainable business practices for improved transparency, accountability, and inclusiveness; the Mallee CMA is seeking to deliver against the following Governance and Compliance related outcome:

- Internal governance processes are ensuring compliance with all legislative requirements and statutory functions.

Delivery against this stated outcome will also contribute to achieving priorities established by key policy and strategic frameworks, including:

- Mallee CMA Risk Management Policy (2017)
- Mallee CMA Cultural Competency Framework (2016)
- Mallee CMA Diversity and Inclusion Plan (2017-22)
- Mallee CMA HR and Integrity 2020 Strategy
- Mallee CMA Internal Control, Compliance & Integrity Policy (2017)
- Mallee CMA Quality Objectives (2018)
- Ministerial Expectations for 'climate change', 'leadership, diversity and culture' and 'improved performance and demonstrating outcomes' (2018-19).

Outcome Indicators and Performance Measures

Progress against this strategic outcome is measured through organisational performance against six key indicators (see Table 17).

Over the 2018-19 reporting period, the Mallee CMA has continued to plan for and respond to a changing climate by continuing to incorporate priority landscapes and associated interventions established by the Mallee Natural Resource Management Plan for Climate Change (2016) into the ongoing delivery of regional programs. In 2018-19 this has included a joint initiative across Victorian CMA's to engage with Traditional Owners to identify opportunities for carbon farming and the economic benefits associated credits may present. Mallee CMA was selected as a pilot study under this program. Mallee CMA has also continued to participate in the development and application of 'Catchment Carbon Offset' tools, supporting Victorian CMA's and Water Corporations to evaluate proposed carbon offset projects.

Delivery against the Mallee CMA Diversity and Inclusion Plan commenced in 2018-19, demonstrating the organisation's commitment to actively building a diverse workforce while encouraging leadership and culture. Key actions undertaken to date have included delivering engagement activities in partnership with diverse community groups (e.g. Sunraysia Multicultural Ethnic Communities), completion of cultural awareness training by 64% of Mallee CMA staff, ensuring appropriate gender balance on recruitment panels, encouraging staff participation in events that promote LGBTIQ awareness and inclusion, delivering organisational Health and Wellbeing program and encouraging all staff to participate.

Mallee CMA commitment to a high level of corporate governance continues to be demonstrated by the ongoing effort invested in retaining ISO 9001:2015 certification for our Quality Management System. Since achieving accreditation in 2016, annual surveillance audits have not identified any major non-conformities. Furthermore, 100% of areas identified for improvement by regular internal audits and management reviews have been addressed within scheduled timeframes.

The organisation also continues to work closely with DELWP and other funding bodies to improve reporting systems and processes as evidenced by our ongoing participation in, and contribution to, statewide forums such as the Regional Investment Coordinator, Regional Catchment Strategy and Corporate Manager working groups. Ongoing delivery against the Mallee CMA Information, Communication and Technology (ICT) strategy is also supporting further enhancements and efficiencies in our monitoring and reporting frameworks. Further examples of initiatives employed over the reporting period to deliver efficiencies include participation in a shared services agreement among Sunraysia agencies to work together to achieve better

business and community outcomes at the regional level. A key example being the same Rapid Induct system being used by the local water corporation, CMA and local council to induct contractors and monitor OHS compliance.

Key initiatives and projects

An overview of key initiatives which supported the Mallee CMA to deliver against their stated Governance and Compliance priority activities and associated performance targets in 2018-19 is provided in Table 19.

Activity Indicators and Performance Measures

Performance against the organisations 2018-19 priority activities for progressing Governance and Compliance outcomes, including actual delivery against budgeted targets is provided in Table 18. Overall, 100% of performance targets were achieved or were within 5% of the budgeted outputs.

Table 17 | Progress against performance measures for Governance and Compliance strategic outcome indicators.

Outcome Indicators	Performance measures	Unit of measure	2015-16	2016-17	2017-18	2018-19
Maintain ISO 9001:2015 Certification	Major non-conformities findings by annual surveillance audits and three yearly accreditation audit (<i>certification achieved in 2016</i>)	number	N/a	N/a	0	0
Approved (ministerial) Corporate Plan and Annual Report	Compliance with Corporate Plan guidelines as issued by government	percent	100	100	100	100
	Compliance with Annual Report guidelines as issued by government	percent	100	100	100	100
Submitted (minister) Mallee CMA Board Annual Performance Assessment	Compliance with Board Annual Performance Assessment guidelines as issued by government	percent	100	100	100	100
Increased diversity and inclusion in the workplace	Priorities identified by Mallee CMA Diversity and Inclusion Plan annual 'Action Plan' implemented (<i>delivery commenced 2018-19</i>)	percent	N/a	N/a	N/a	97
Increased stakeholder satisfaction with Mallee CMA services	Registered stakeholder feedback which is 'positive'	percent	94	97	98	89
	Participants rating their overall enjoyment of engagement activities as good/excellent	percent	98	92	93	97
	Participants rating the delivery of information at engagement activities as good/excellent	percent	95	89	92	97
Reduced timeframes in responding to statutory functions under the Water Act	Statutory requirements (permits, referrals, advice, and licenses) responded to within the prescribed period (<20 working days)	percent	100	98	100	100

Table 18 | Performance against 2018-19 Governance and Compliance activity measures.

Activity Indicators	Performance measures	Unit of measure	2018-19 actual	2018-19 target	Performance variation (%)	Result
Provide services that minimise environmental impacts and mitigate climate change by exploring opportunities to provide carbon offsets and partnering with Traditional Owners for carbon sequestration	Initiatives supported	number	2	2	0	✓
Implement strategies that will increase cultural diversity in the workforce and gender equity in executive leadership (Ministers Expectation)/ Leadership, diversity and culture	Priorities identified by Mallee CMA Diversity and Inclusion Plan 2018-19 'Action Plan' implemented	percent	97	100	-3	■
Encourage staff participation in the Victorian Public Sector Commission "People Matter Survey"	Staff participation in 2018-19 survey	percent	85	85	0	✓
Deliver our annual plan on time and to budget	Compliance with 2017-18 Annual Report guidelines as issued by government	percent	100	100	0	✓
	Compliance with 2019-24 Annual Report guidelines as issued by government	percent	100	100	0	✓
Fulfill our funding obligations	Variance in budgeted output actuals	percent	13	<10	3	■
Develop NRM strategies and action plans in line with government policy and guidelines	Regional strategies/action plans submitted in line with stated timeframes and approved by government (where applicable)	number	0	0	0	-
Collaborate with funding bodies to improve reporting systems and processes	Reporting focused forums supported/ attended	number	4	4	0	✓
Deliver efficiency through shared services, smarter procurement, and lower-cost technology.	Initiatives delivered and/or supported to achieve efficiencies	number	4	4	0	✓

Table 19 | Key outputs delivered under government programs/initiatives contributing to the achievement of 2018-19 priority 'Governance and Compliance' activities and associated performance targets.

Program/Initiative	Key 2018-19 outputs and achievements	
Catchment Governance Program	<p>The Mallee CMA delivers against corporate and statutory functions set out under <i>Catchment and Land Protection Act 1994</i> through funding support provided by the Victorian Government.</p> <ul style="list-style-type: none"> • 11 Ordinary Board Meetings conducted and ongoing operation of associated sub-committees; including the audit committee (11 meetings) and remuneration committee (2 meetings). • Ongoing operation of the Land and Water Advisory Committee, maintaining a two-way communication channel between Board and members of the Victorian Mallee community (4 meetings). • Development, implementation and reporting of business plans to support compliance with legislative obligations; including the 2017-18 Annual Report, 2019-24, Corporate Plan, and 2017-22 Diversity and Inclusion Plan in accordance with Government guidelines. • Commencing development of the Mallee CMA Learning and Development Framework. <ul style="list-style-type: none"> • 11 information management systems maintained, including social media platforms and Mallee CMA website, Technology One, financial and document management systems, and Rabid Global contractor induction system. Delivery against the organisations overarching Mallee CMA Information, Communication and Technology (ICT) strategy is ensuring that these individual components are part a coordinated framework which continues to identify efficiency opportunities. 	
Waterway Health Program	<p>Water Statutory Functions as required under Part 10 and 11 of the <i>Water Act</i> (1989) are delivered by the Mallee CMA, through funding from the Victorian Government's Waterway Health Program.</p> <ul style="list-style-type: none"> • Delivery against the Mallee CMA statutory responsibilities with regard to floodplain management and works on waterways included: 40 referrals, 40 approvals/advice, and 15 permits. Average response time in 2018-19 was 9.2 days. • Supporting the delivery of three flood studies across the region to provide regional stakeholders with more accurate data and mapping for improved management of future flood events. • Supporting the development of two local government planning scheme amendments. <ul style="list-style-type: none"> • Ongoing application of Floodzoom program, including change to new Planning System module for processing and responding to integration floodplain referrals, advice and works on waterways permits. • Ongoing participation in 4 partnership forums, including the Mallee Floodplain Management Strategy Implementation Committee, the Victorian Floodplain Management Forum, and Municipal Flood Emergency Management Plan meetings. 	



Mallee CMA Diversity and Inclusion Plan.

Integrated Catchment Management

Mallee CMA programs and projects are developed to deliver against regional priorities as detailed in the Mallee Regional Catchment Strategy 2013-19 (RCS) and its associated sub-strategies and plans. The Mallee RCS is prepared under the provisions of the CaLP Act to establish a framework for the integrated and coordinated management of the region's natural, productive and cultural landscapes. Developed in partnership with regional stakeholders, it provides a six-year framework for strategic action to support and focus the ongoing coordinated effort of the region's land managers, government agencies and community groups.

Application of the RCS's integrated and targeted delivery framework to project planning further ensures that available resources are applied effectively and efficiently. Under this framework key threatening processes are addressed across priority landscapes to deliver environmental, social and economic outcomes for multiple asset types (e.g. waterways, biodiversity and community capacity) and their associated natural, cultural and/or productive values.

The RCS monitoring, evaluation, reporting and improvement (MERI) framework is applied to all Mallee CMA programs, projects and associated activities to support continuous improvement and adaptive management processes.

By continuing to apply this approach to the identification and implementation of regional NRM priorities, the Mallee CMA is seeking to deliver against the following Integrated Catchment Management related outcome:

- Regional planning, delivery and evaluation processes are supporting integrated and targeted NRM outcomes.

Delivery against this stated outcome will also contribute to achieving priorities established by key policy and strategic frameworks, including:

- Our Catchments, Our Communities Strategy (2016-19).
- Ministerial Expectations for 'waterway and catchment health' and 'improved performance and demonstrating outcomes' (2018-19).

Outcome Indicators and Performance Measures

Progress against these strategic outcomes is measured through organisational performance against three key indicators (see Table 20).

Ongoing implementation of the 2016-20 Mallee CMA Integrated Catchment Management (ICM) project: "The Tyrrell Project – Ancient Landscapes, New Connections" is delivering substantial progress against Mallee Regional Catchment Strategy (RCS) identified actions for one of its 17 priority landscapes (Catchment Assets); the Avoca Basin Terminal Lakes System and Creeklines. It is also directly delivering against Action 3.1 of the Statewide

Our Catchments, Our Communities Strategy (OCOC); specifically in regards to the Strategies' stated success measure of 'integrated catchment management projects delivering against RCS priorities'.

The Vic Catchments forum aims to strengthen collaboration and performance in the catchment management sector, with the advancement of ICM and an increase in the level of state-wide influence and confidence in the ICM principles a primary focus. Mallee CMA participation in, and support for this forum has provided for ongoing delivery against stated strategic priorities. These include annual production of the Victorian CMA's Actions and Achievements Report, implementation of the Victorian CMA's Community Engagement and Partnership Framework, participation in OCOC Annual Summit, and maintenance of the VCMA 'Climate Ready Natural Resource Management Planning in Victoria' website.

The OCOC Strategy also identifies a key success measure for each of Victoria's 10 CMA regions as being to develop Catchment Partnership Agreements (CPAs) with key delivery partners. The Mallee CPA was established in 2017-18 with six signatories; Mildura Rural City Council, Trust for Nature, Parks Victoria, Lower Murray Water, DELWP and DJTR. Regular CPA forums to support the implementation and review of an annual Work Plan is providing an effective knowledge sharing mechanism for members and further strengthening a collaborative approach to NRM in the region.

Activity Indicators and Performance Measures

Performance against the organisations 2018-19 priority activities for progressing Integrated Catchment Management outcomes, including actual delivery against budgeted targets is provided in Table 21. Overall, 100% of performance targets were achieved or exceeded over the reporting period, with the exception of 1 planned MER Plan. This relates to development of a regional MER Plan to support the Mallee Floodplain Management Strategy (2018-28); commencement of which is pending finalisation of the overarching state framework.

Key initiatives and projects

An overview of key initiatives which supported the Mallee CMA to deliver against their stated Integrated Catchment Management priority activities and associated performance targets in 2018-19 is provided in Table 22.

Table 20 | Progress against performance measures for Integrated Catchment Management strategic outcome indicators.

Outcome Indicators	Performance measures	Unit of measure	2015–16	2016–17	2017–18	2018–19
Increased participation in regional and state-wide planning, evaluation and reporting forums	ICM based forums participating in annually	number	5	6	7	7
Increased number of Mallee RCS strategic actions delivered against	RCS strategic actions (6 year) delivered against annually	percent	76	92	93	95
Increased number/area of on ground works delivered within Mallee RCS priority landscapes and corridors	On-ground works outputs delivered annually within RCS priority landscapes.	percent	N/a	81	92	99

Table 21 | Performance against 2018-19 Integrated Catchment Management activity measures.

Activity Indicators	Performance measures	Unit of measure	2018–19 actual	2018–19 target	Performance variation (%)	Result
Work collectively via Vic Catchments membership to strengthen collaboration/ performance in the Catchment management sector in Victoria	Priority actions/projects identified within Vic Catchments 2018-19 Strategic Framework actively supported.	number	6	6	0	✓
Lead implementation of, and be signatories to, the Mallee Catchment Partnership Agreement (2018)	Priority actions identified within 2018-19 Work Plan progressed.	percent	100	100	0	✓
Lead the development and implementation of landscape-scale – integrated catchment management projects for the region.	ICM projects being implemented to deliver against Mallee RCS and OCOC Strategy priorities.	number	1	1	0	✓
Target NRM activities to locations that will deliver the greatest environmental, social and economic return on investment.	On-ground works outputs delivered within RCS priority landscapes.	percent	99	85	16	✓
Support the ongoing measurement, and where required development of catchment condition (long term); outcome (medium term) and output (short term) indicators to facilitate improved reporting and evaluation processes at both the regional and state scale.	Regional 'MER' focused forums coordinated	number	2	2	0	✓
	'MER' Plans/Frameworks developed, implemented or reported annually	number	7	8	-13	■
Maintain a Regional Evidence Base to record and communicate all aspects of delivery and evaluation.	Regional evidence base maintained to meet Mallee CMA RCS & Corporate Plan MER framework requirements	number	1	1	0	✓

Table 22 | Key outputs delivered under government programs/initiatives contributing to the achievement of 2018-19 priority 'Governance and Compliance' activities and associated performance targets.

Program/Initiative	Key 2018-19 outputs and achievements	
Catchment Governance Program	<p>The Mallee CMA delivers against corporate and statutory functions set out under <i>Catchment and Land Protection Act 1994</i> through funding support provided by the Victorian Government.</p>	
	<p>Ongoing participation in regional and state-wide planning, evaluation and reporting forums. In 2018-19 this included:</p> <ul style="list-style-type: none"> • Vic Catchments forum, with support provided for delivery against Strategic Framework priority actions/projects (e.g. Victorian CMA's Actions and Achievements Report, Victorian CMA's Community Engagement and Partnership Framework, OCOC Annual Summit, and Victorian CMA 'Climate Ready Natural Resource Management Planning in Victoria' website. • Membership of the Tri-State Murray NRM Regional Alliance, which consists of the Victorian North East, Goulburn Broken, North Central and Mallee Catchment Management Authorities; the New South Wales Murray Local Land Services; and the South Australian Murray-Darling Basin Natural Resources Management Board. The Alliance was formalised by the signing of the Tri-State Murray NRM Regional Alliance MOU in 2015. 	<ul style="list-style-type: none"> • Coordination of an internal MER working group to support the development and implementation of standardised MER approaches across all areas of Mallee CMA operations. Includes facilitation of overarching MER framework to inform development and review of project/program based Plans. • Application and maintenance of regional evidence base to support the collection, collation and communication of information required by RCS and Corporate Plan reporting frameworks.
Our Catchments Our Communities	<p>The Our Catchments, Our Communities Program is supported by the Mallee CMA, through funding from the Victorian Government.</p>	
	<p>Delivery against Action 1.2: of the OCOC Strategy in 2018-19 (i.e. Strengthen community engagement in regional planning and implementation) has included:</p> <ul style="list-style-type: none"> • Ongoing engagement of 2 community advisory committees and 3 regional partnership committees to seek member input on regional planning and delivery processes. • Ongoing coordination and facilitation of the Catchment Partnership Agreement forum to enhance knowledge sharing between members and further strengthen collaborative approaches to NRM in the region. • Ongoing implementation of the Mallee Community Capacity for NRM 'Program' Monitoring Framework to quantify the effectiveness and impact of community/stakeholder engagement activities, and determine the extent of capacity change they provide. The 'Regional' Community Capacity Tool was also applied in August 2018, to support assessments of any change in Community Capacity at the regional scale from the 2012 benchmark. • Delivery of 'Regional Leadership Grants' which supported 8 members of the Mallee Aboriginal Reference Group to attend the National Reconciliation Action Plan Conference, 3 members of Mallee CMA community committees attend a Women in Leadership Forum, and the delivery of an NRM engagement event in partnership with Sunraysia Mallee Ethnic Communities Council; with 35 participants from culturally diverse backgrounds participating. 	<p>Delivery against Action 2.1 of the OCOC Strategy in 2018-19 (i.e. Ensure alignment between state, regional and local plans that impact on land, water and biodiversity, and Regional Catchment Strategies) has included:</p> <ul style="list-style-type: none"> • Collation and provision of Mallee CMA data for inclusion in the 2017-18 Victorian Catchment Management Authorities' Actions and Achievements Report. • Participation in DELWP Output Data Standard/Output Delivery Standard processes to provide input into the Biodiversity Division review. <p>Delivery against Action 3.1 of the OCOC Strategy in 2018-19 (i.e. Implement an investment framework that supports coordination and accountability for the delivery of RCS priorities) has included:</p> <ul style="list-style-type: none"> • Implementation of the 2016-20 Mallee CMA ICM project: "The Tyrrell Project – Ancient Landscapes, New Connections". This community-driven landscape-scale project is working across the Avoca Basin (RCS priority landscape) to improve environmental assets (e.g. Lake Tyrrell, its creeks and wetlands) and enhance recreational and tourism opportunities.



The Tyrrell Project working across the Avoca Basin to improve environmental assets and enhance recreational and tourism opportunities.

Part 1

Condition and Management Report

Overview

Background

This condition and management report for 2018-19 aims to fulfil the Mallee CMA's annual reporting requirements as outlined in Section 19B of the CaLP Act 1994, which states that: Each Authority must submit to the Minister each year, a report on the condition and management of land and water resources in its region and the carrying out of its functions.

The report provides an assessment of the condition of the region's environment and a reflection on the likely impact of annual actions, events and observed change.

A key purpose of monitoring catchment condition and annual progress against management priorities is to help identify opportunities for adapting and changing the way we manage the environment.

Condition and management is reported against five headline themes to align with Regional Asset classes identified by the Mallee RCS 2013-19. Further detail on these is provided in Table 23.

An overview of any key events (e.g. climatic, policy changes) that occurred in 2018-19 that may have influenced the management and/or condition of our regional assets is also provided within this report.

Table 23 | Headline theme, regional asset and definition.

Headline theme	RCS Regional Asset	Definition
Community	Community capacity for NRM	The inherent knowledge, understanding and willingness that the community has for effective and sustainable natural resource management.
	Culture and heritage	Locations that have recognised cultural, historical or spiritual significance to all or part of the Mallee and/or Australian community.
Waterways	Rivers	Rivers, streams, their tributaries, and surrounding riparian land (including the floodplain).
	Wetlands	Individual wetlands, wetland complexes, and their associated floodplain ecosystems (including groundwater dependent ecosystems and the groundwater flow systems and aquifers they are reliant on).
Biodiversity	Threatened species and communities	Populations of threatened or significant species; occurrences of threatened communities.
	Terrestrial habitat	Individual ecological classes or spatial occurrences of ecological vegetation classes based on their intrinsic value to their contribution to landscape processes (e.g. connectivity, refugia, buffering etc.).
Land	Soils	All soils regardless of their tenure and type of land system to which they are subject.
	Agricultural land	All parts of the landscape developed for the purpose of agricultural production.
	Groundwater	Groundwater resources that are utilised for human use such as irrigation or stock and domestic water supply.

Key Events and Insights

Climate

Annual climatic conditions can have a significant impact on both the condition and management of regional assets. In 2018-19 the Mallee region experienced 'below average'

to 'very much below average' rainfall over the cooler months (April to November) (Figure 4) and 'average' to 'very much below average' in the warmer period (October to April) (Figure 5). Several heatwaves were also experienced throughout summer, with several sites recording a record number of days in January with temperatures of 40°C or more.

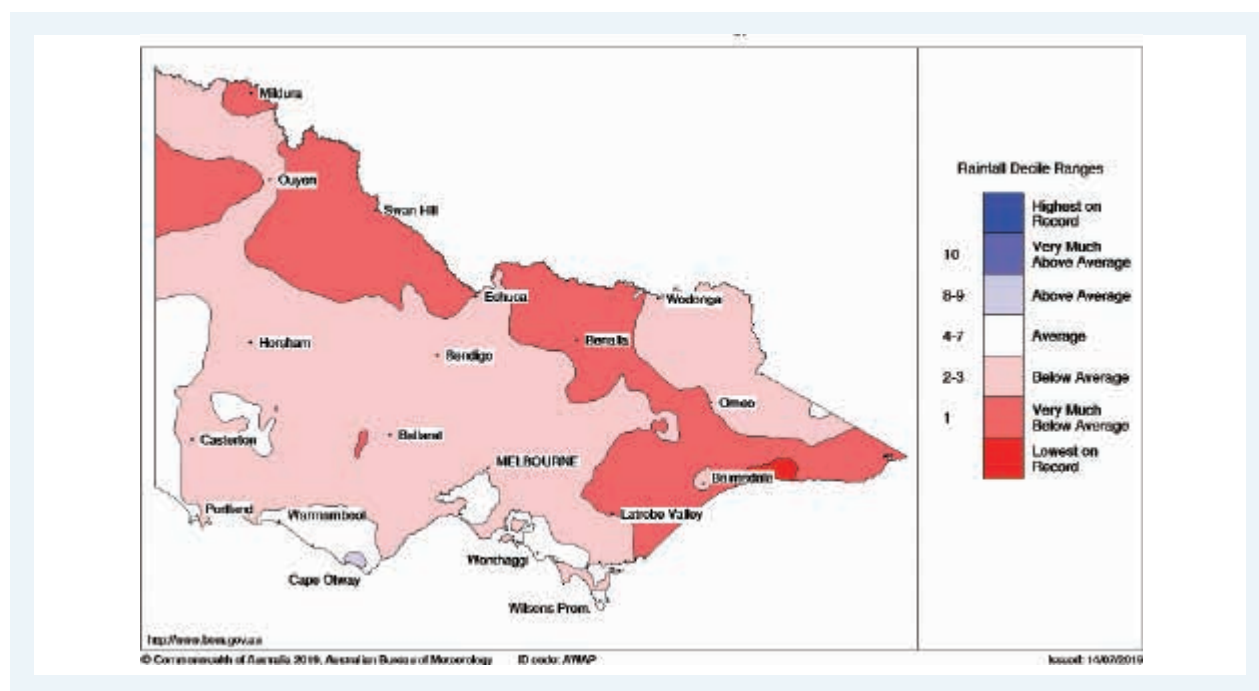


Figure 4 | Victorian Rainfall Deciles 1 April 2018 to 30 November 2018 (Source: Australian Bureau of Meteorology).

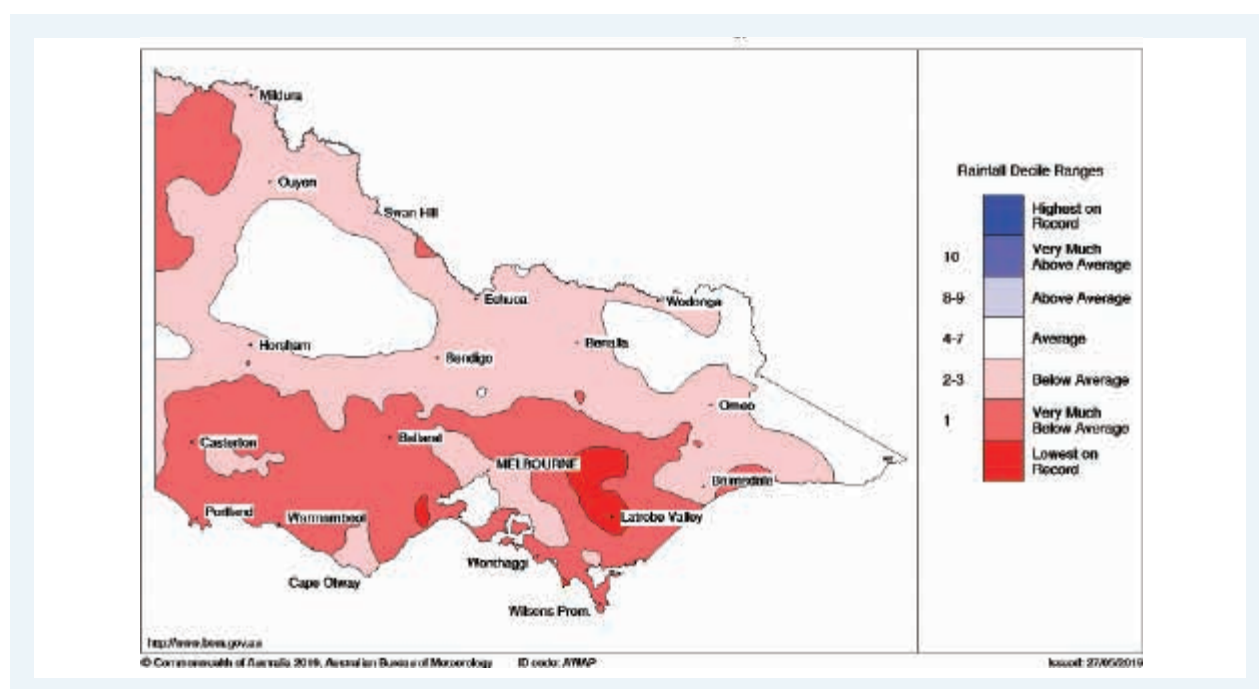


Figure 5 | Victorian Rainfall Deciles 1 October 2018 to 30 April 2019 (Source: Australian Bureau of Meteorology).

Key climatic events experienced throughout 2018-19 included:

- Winter rainfall was below to very much below average across most of the region, with rainfall totals in the driest 10% on record for July. Temperatures were also warmer than average with persistently mild days experienced throughout July (e.g. 24°C recorded at Mildura on 5 July).
- Below-average rainfall continued into spring with much of the region receiving less than 20% of their September average and some sites experiencing their lowest September rainfall on record (i.e. Mildura 0.8mm and Walpeup 3.2mm). Night time temperatures were very much below average including a large area of lowest on record, with significant frost events impacting dryland crop yields.
- Average summer rainfall was experienced by most of the region, with the exception of the Birchip area where 130mm on the 14 December resulted in localised flooding. This represented their highest daily rainfall total on record. Several heatwaves were also experienced throughout summer, with several sites recording a record number of days in January with temperatures 40°C or more (i.e. Mildura (13), Walpeup (12), and Hopetoun (10)). Walpeup also recorded their highest summer mean temperature on record.
- In autumn, rainfall patterns returned to below average with most sites receiving less than 20% of mean total rainfall in March and less than 10% of their April average. Temperatures were also higher than average in March and April.
- Water inflows to the key Murray, Goulburn and Darling storages were well below long term averages.
- Water allocations to High-Reliability shares held on the Victorian Murray reached 100% allocation on the 17th December 2018.

Delivery Partnerships

Over 460,000ha of targeted environmental works were undertaken in 2018-19 to protect the region's priority natural, cultural and productive landscapes. Effective partnerships with our community are integral to the success of these on-ground activities. In 2018-19 this included the provision of 121 individual funding grants to both community groups (33) and private land managers (88).

Community engagement and capacity building approaches also continued to be well supported. In 2018-19 this resulted in some 7,695 stakeholders participating in 670 individual events. Evaluation of these activities identified that 96% of surveyed participants rated the overall delivery of events as either 'excellent' (66%) or as 'good' (30%).

Planning for these delivery partnerships and engagement activities continues to be informed and enhanced by advice received from regional stakeholders through forums such as the Mallee CMA's Aboriginal Reference Group, Land and Water Community Advisory Committee, and Catchment Partnership Committees.

This regional partnership framework includes the *Mallee Catchment Partnership Agreement* forum which was established in 2017-18 to deliver on a key action of the Victorian Government's *Our Catchments, Our Communities - Integrated Catchment Management in Victoria (2016-19)*. Seven key regional organisations are signatories to the *Mallee Catchment Partnership Agreement*; spanning local government, water corporations, State Government departments/agencies, and non-governmental organisations. These organisations met regularly throughout 2018-19 to progress their shared commitment of:

- Strengthening coordination, collaboration, and accountability;
- Reducing duplication; and
- Providing clarity on roles and responsibilities between key catchment management partners.

The Mallee Floodplain Management Strategy (FMS) Implementation Steering Committee was also established in 2018-19, with representatives from key regional stakeholders collaborating to identify and implement priority actions.

Strong partnerships between the Mallee CMA, Lower Murray Water and the Department of Environment, Land, Water, and Planning are continuing to improve salinity management in the Mallee, as part of delivering against Action 4.8 of the Victorian Government's *Water for Victoria* policy. In 2018-19 this included:

- Reviewing and refining salinity management policy in response to emerging issues and sustainable irrigation requirements (e.g. reviews of the salinity offset charging process).
- Investing revenue from salinity charges to update our knowledge of the Victorian Mallee salinity impacts and the cost of offsets, consistent with Basin Salinity Management 2030.

Strategic Framework

The following strategic documents were developed or reviewed by the region in 2018-19, representing ongoing advances in the planning, delivery, and evaluation of both NRM and governance focused activities.

- Mallee CMA Corporate Plan (2019-24)
- Mallee CMA Stakeholder Engagement Strategy (2018-19)
- Hattah Ramsar Site Monitoring, Evaluation and Reporting (MER) Plan
- Seasonal Watering Proposals (2019-20) for Living Murray Icon Sites, Lower Murray wetlands and Wimmera Mallee Pipeline wetlands
- Mid-term review of the Mallee Waterway Strategy (2014-22)
- Victorian Murray Floodplain Restoration Project (VMFRP) Delivery Strategy (2019-24).

Renewal of the Victorian Mallee Irrigation Region Land and Water Management Plan (LWMP) was also progressed throughout 2018-19, with a Draft Plan scheduled to be released for public consultation early in 2019-20.

Management

The RCS (2013-19) sets 20 year objectives and six-year strategic actions for each Regional Asset class to inform and direct the planning, implementation, evaluation, and reporting of NRM activities in the Mallee. The management assessment sections of this report summarise annual (2018-19) progress against these strategic actions.

The RCS also provides a framework for strategic action to support integrated and targeted efforts of the region's land managers, government agencies and community

groups. The overall extent and distribution of 2018-19 management actions delivered within the region's priority landscapes (i.e. Catchment Assets and Corridors) under each headline theme are illustrated spatially in Figure 6. Catchment Assets represent significant landscapes for priority attention (i.e. deliver the greatest environmental, economic and social return on effort); while priority corridors have been identified as the best places for biodiversity corridors between two or more Catchment Assets to support ongoing adaptation processes.

Detail on the specific activity types these actions represent and their contribution to regional priorities is provided in the following sections. A summary of the RCS sub-strategy that each activity type was delivered under is also provided in Appendix 2.



Flood event in Birchip region December 2018.

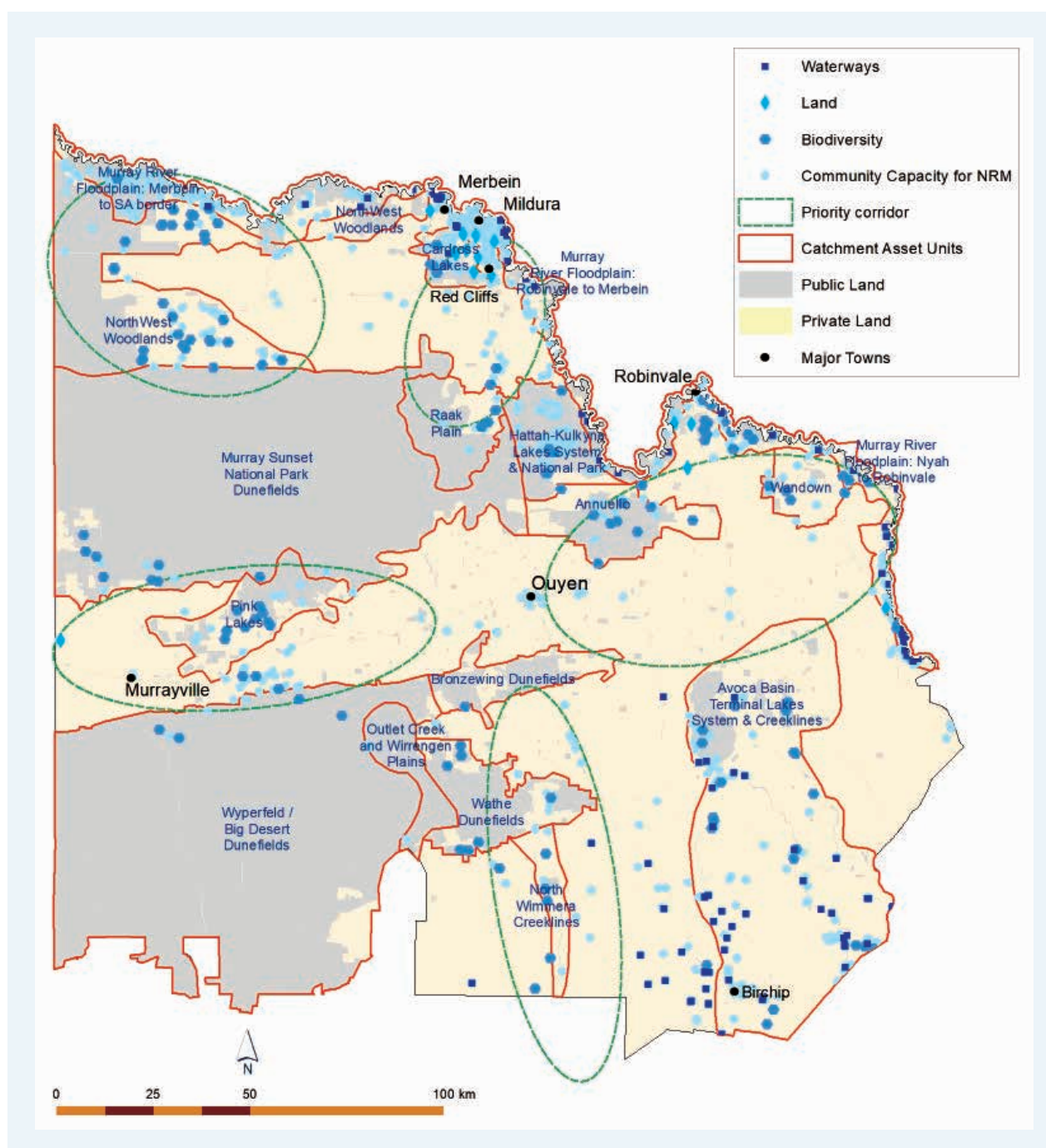


Figure 6 | Spatial distribution of management actions (outputs) delivered in 2018-19 under each of the RCS headline themes.

As illustrated by Table 24, a large proportion of 2018-19 on ground management activity was delivered within the region's priority landscapes. Ongoing application of this approach is ensuring the efficient and effective application of NRM investment in the region.

The integrated nature of NRM delivery in the Mallee also means that actions delivered under one theme often achieve benefits across multiple asset types within the same landscape.

Table 24 | Proportion (%) of 2018-19 on ground outputs delivered within the region's priority landscapes (Catchment Assets and Priority Corridors).

Output type	Delivered in priority landscapes (%)*		Delivered outside priority landscapes (%)
	Catchment Assets	Priority Corridors	Catchment Assets & Priority Corridors
Pest Animal Control	97%	56%	3%
Weed Control	96%	35%	4%
Water Regime	99%	14%	1%
Revegetation	100%	20%	-
Earth Works	100%	0%	-
Road	100%	41%	-
Fence	100%	11%	-
Visitor Facility	100%	8%	-





* Overlap of Catchment Asset and Priority Corridor boundaries means that collective % of works occurring within them can be greater than 100%.

Catchment Condition

The catchment condition assessment for each theme describes the level of confidence or concern that catchment managers have in the future of the regional environment. The assessment is based on available

science and expert advice as well as evidence gained during the preceding year and uses the criteria detailed in Table 25. A positive assessment indicates a level of optimism about future direction and a concerned or highly concerned assessment indicates a more pessimistic view of the direction of environmental change.

Table 25 | Assessment criteria for annual reporting.











Assessment criteria		
1. Positive		An optimistic future with evidence that events during the year will have a positive impact on the longer term.
2. 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.
3. Concerned		A level of concern that significant events during the year may have an adverse impact in the longer term.
4. Highly concerned		A high level of concern that significant events during the year are likely to have an adverse impact in the longer term.



Environmental water at Stoney Creek Crossing.





A summary of 2018-19 condition assessments for each of the RCS Regional Asset classes is provided in Table 26. Further detail on the evidence that informed these assessments is provided in the following sections.

Table 26 | Summary of 2018-19 condition assessment for each of the Mallee RCS (2013-19) Regional Asset classes and associated evidence base.

Headline Theme	Regional Assets	Previous 3 Year Assessment	2018-19 Condition Assessment	Summary of 2018-19 key evidence
Community	Community Capacity for NRM			<p>Significant number (7,695) of stakeholders and broader community members participating in 2018-19 awareness, skill development, and collaboration events.</p> <p>Evaluations identified a high level of participant satisfaction in regards to the delivery of these events.</p> <p>Improvements in capacity being reported by stakeholders engaged through education programs (i.e. awareness raising), incentive/grants programs (i.e. knowledge and skill development); and by those participating in community advisory/reference groups.</p>
	Culture and Heritage			<p>20 additional Cultural Heritage Management Plans (CHMPs) approved and lodged with Aboriginal Victoria in 2018-19.</p> <p>1 additional Registered Aboriginal Place, bringing the total to 4,435; and a further 199 components (e.g. hearths, burial remains, scarred trees) recorded on ACHRIS (6,031 total).</p> <p>No additional non-Aboriginal heritage sites were registered in 2018-19, evidence however of resources being allocated for the maintenance and restoration of a selection of the 536 sites.</p>
Waterways	Rivers & Wetlands			<p>Significant areas of inundation achieved through environmental watering (48 sites x 559ha in 2018-19) is having a demonstrable impact on waterway connectivity and both aquatic and riparian habitat condition.</p> <p>Over 12,000ha of targeted threat mitigation works (e.g. invasive plant and animal management) delivered in 2018-19 to further secure environmental outcomes achieved by recent watering events, and to protect priority riparian landscapes.</p> <p>Site based monitoring has identified reductions in threat incidence/impact and associated improvements in condition measures (e.g. native flora regeneration) resulting from these works.</p>
Biodiversity	Threatened Species and Communities			<p>Evidence of an increase in population numbers/distribution of threatened flora and fauna species experiencing favourable conditions in 2018-19 (e.g. environmental watering).</p> <p>While much of the region experienced dry seasonal conditions in 2018-19, some evidence to support the expectation that the significant area of threat mitigation works undertaken (i.e. over 440,000ha) will provide a basis for future improvements as favourable climatic conditions occur.</p>
	Terrestrial Habitat			<p>Significant area of targeted works undertaken in 2018-19 to protect and enhance priority habitat (8,268ha); with the 440,000ha of works targeting threatened species/communities also expected to benefit the terrestrial habitat they were delivered in.</p> <p>Evidence of changes in the incidence of key threatening processes resulting from 2018-19 works programs. This included reductions in rabbit populations to <2 per ha (i.e. threshold required to support regeneration), and quantified decreases in extent and density of target weed species.</p> <p>Evidence of condition improvements as a result of these threat mitigation actions. This included improvements in habitat condition once grazing was removed (i.e. stock exclusion fencing); and evidence of ecological functionality returning to revegetated sites.</p>

Continued...

Table 26 | Summary of 2018-19 condition assessment for each of the Mallee RCS (2013-19) Regional Asset classes and associated evidence base. *Continued...*

Headline Theme	Regional Assets	Previous 3 Year Assessment	2018-19 Condition Assessment	Summary of 2018-19 key evidence
Land	Dryland Agriculture			<p>On average 88% of the region exceeded 50% groundcover (target) throughout 2018-19, a 9% decline from the previous year's average. Also evident however that the majority of dryland farmers continue to implement practices that reduce the risk and incidence of soil erosion.</p> <p>Some spatial variability evident in management practices and associated erosion risk, however, with the northern 'Millewa' land system recording an increase in conventional fallow. Groundcover in the Millewa remained consistently low throughout 2018-19 (e.g. 34% in January), influencing whole of region averages. Above average dust activity was also recorded at the Werrimull site in autumn.</p> <p>Ongoing dry conditions experienced throughout the region played a significant role in the low groundcover levels recorded at both the whole of region and individual landscape scale. This result would have been significantly worse however without the widespread changes in management practices that have occurred over past years.</p> <p>Further support required in the northern areas of the Mallee to accelerate the identification, validation and adoption of practices that promote increased groundcover and reduce erosion risk.</p>
	Irrigated Agriculture			<p>Increased adoption of best management practice by irrigators achieved an estimated 3,312 tonne/year reduction in salt loads to the Murray River and significant improvements in on farm water use efficiency.</p> <p>Long-term observed downward trends in drainage outfalls to the Murray River and its environs, and groundwater mounds beneath the older irrigation areas, continued in 2018-19.</p> <p>Metered extraction within the Murrayville GMA was 85% of the licensed volume for 2018, a 30% increase from 2017. Even with a high level of extraction the groundwater aquifer continues to demonstrate a recovering trend. Salinity levels also remained stable in 2018.</p>

Community

The Mallee has a long history of the community generating and implementing innovative and complex NRM projects and plans, with established partnerships operating between all sectors of our community including land managers (public and private), industry groups, community based groups, Aboriginal stakeholders, and government agencies and authorities. A well-informed community with the skills and confidence to identify, direct and implement change is essential for the maintenance of these partnerships and the NRM outcomes they deliver.

The region's long history of human occupation, spanning thousands of years, and the historical significance of its more recent non-Aboriginal history, require sites of cultural and heritage significance to be given critical considerations in NRM based activities.

This headline theme also includes the Culture and Heritage Regional Asset, for which the RCS set a long-term (20 year) objective of 'to protect the extent and condition of Cultural Heritage (Aboriginal and non-Aboriginal) sites across all Mallee Land Tenures.'

Table 27 summarises the key activities that contributed to the RCS' six-year strategic actions for Culture and Heritage and Community Capacity for NRM in 2018-19. Regional stakeholders engaged in the planning and delivery of these outputs included the Mallee CMA, DELWP, DJPR, Parks Victoria, water authorities, local government, Trust for Nature, Landcare and community based NRM groups, Birchip Cropping Group, Mallee Sustainable Farming, private sector industry groups, Traditional Owners, Aboriginal community, and private land managers.

Community Management

The RCS sets the long-term (20 year) objective for Community Capacity for NRM in the Mallee as being 'to increase community capacity for, awareness of, and participation in efforts to protect the Mallee's natural, cultural and agricultural landscapes.'

Table 27 | Progress against RCS Strategic Actions for Culture and Heritage and Community Capacity for NRM.

Strategic (6 Yr) Actions	2018-19 Progress
Culture & Heritage	
8.1.1. Continue to support the development and implementation of Local Government Heritage Overlays in the Mallee.	Ongoing review and application of Heritage Overlays as part of local council planning schemes. Amendments actively monitored and reported through LGA planning processes.
8.1.2. Continue to support the development and implementation of Cultural Heritage Management Plans in the Mallee.	7 Cultural Heritage Management Plans (over 300ha) developed and implemented in line with Aboriginal Heritage Regulations. Actively monitored and reported through the Victorian Aboriginal Heritage Register.
8.1.3. Continue to support the protection and management of cultural heritage sites as an integral component of all land, water and biodiversity management processes.	<p>144 cultural heritage assessments undertaken at proposed works sites.</p> <p>Application of regional tools to support improved identification and management of cultural heritage sites (e.g. regional field guides for managing pest plants and animals in cultural landscapes).</p> <p>Consideration and incorporation of cultural heritage values in regional strategies and management plans reviewed in 2018-19 (e.g. Victorian Mallee Irrigation Region Land and Water Management Plan, Environmental Watering Management Plans).</p>
Community Capacity for NRM	
9.1.1. Continue to support the development and implementation of community education programs to increase awareness of the Mallee's natural, cultural and agricultural assets; and to encourage actions which contribute to their protection and enhancement.	<p>Significant number of both targeted and whole of community NRM education activities delivered in 2018-19, including:</p> <ul style="list-style-type: none"> • 109 field days (2,125 participants) • 37 workshops (743 participants) • 22 training events (127 participants) • 123 presentations/displays (1,917 participants) • 379 forums/meetings (2,783) • 126 technical reports • 47 factsheets • 20 flyers/brochures • 40 media releases • 16 newsletters • 5 videos • 278 social media posts • 25 visitor facilities installed or maintained to enhance access and/or amenity.
9.1.2. Continue to support the development and implementation of programs which support land managers to act as responsive and effective stewards of our natural, cultural and productive landscapes.	<p>Significant number of programs delivered to support private land managers implement priority management actions (e.g. revegetation, pest plant and animal control, irrigation system upgrades). Delivery mechanisms included market-based instruments (e.g. tenders and incentives), and performance based grants; resulting in:</p> <ul style="list-style-type: none"> • 142 management agreements with private land managers for delivery of NRM activities across 52,413ha. <p>Education/training opportunities and ongoing technical support also provided as an integral part of these programs.</p> <p>Opportunities to enhance public land management outcomes actively sought and delivered in 2018-19 through programs such as National Landcare Program, Our Catchments Our Communities, Waterway Health, Environmental Water, and the Threatened Species Initiative. This supported:</p> <ul style="list-style-type: none"> • 74 management agreements/contracts/permits established with public land managers for delivery of NRM activities across some 412,000ha. <p>486 assessments undertaken to support the identification/validation of effective management actions; measurement of long-term condition indicators; and the monitoring of integrated threat incidence and impact monitoring programs. Examples include:</p> <ul style="list-style-type: none"> • Mallee groundwater and surface water monitoring programs. • Pre and post works threat incidence/impact assessments (e.g. pest plants and animals) to inform site prioritisation and evaluation processes. • Mallee revegetation monitoring program to determine survival rates and long term changes in habitat condition. • The Living Murray intervention and condition monitoring programs. • Evaluations undertaken as part of the Mallee Community Capacity for NRM Monitoring Framework.

Continued...

Table 27 | Progress against RCS Strategic Actions for Culture and Heritage and Community Capacity for NRM. *Continued...*

Strategic (6 Yr) Actions	2018-19 Progress
Community Capacity for NRM	
9.1.3. Continue to develop and implement programs which support land managers to identify, and where appropriate, respond to emerging threats and opportunities.	<p>Planning for the repair/replacement of infrastructure impacted by 2016 flood event to support 18-19 delivery of works under Natural Disaster Relief and Recovery Arrangements has included:</p> <ul style="list-style-type: none"> • Completion of 15 cultural heritage assessments and 2 associated cultural heritage management plans. • Establishment of 20 permits (access agreements for environmental works) with land managers (public and private).
9.1.4. Continue to support the development and review of whole farm and landscape scale management plans which consider natural, cultural and productive landscapes	<p>4 irrigators supported to develop Irrigation Drainage Management Plans across 23ha to inform system upgrades.</p> <p>Review and renewal of 3 environmental watering management plans and the development of 10 delivery plans/proposals to inform landscape scale management of the environmental water reserve.</p> <p>Development of 22 detailed site management plans to inform the delivery of targeted works programs.</p>
9.1.5. Continue to develop and implement programs which support Indigenous communities to promote and apply traditional ecological knowledge.	<p>Ongoing support to, and participation in the Mallee Aboriginal Reference Group to facilitate member participation in the planning and delivery of regional NRM activities.</p> <p>Opportunities to incorporate and promote traditional ecological knowledge actively sought and delivered through programs such as National Landcare Program, Environmental Watering, Waterway Health, Our Catchments Our Communities, and Biodiversity Response Planning.</p> <p>Also see 9.1.8</p>
9.1.6. Continue to support, enhance and participate in regional NRM partnerships to plan, deliver and report on the Mallee RCS and associated management plans.	<p>Over 150 partnerships established and/or maintained to facilitate integrated approaches to the development, implementation, and review of regional NRM activities. This included:</p> <ul style="list-style-type: none"> • 2 community advisory committees supported to facilitate stakeholder input to the development, implementation, and review of NRM activities. • 5 regional partnership committees established/maintained to facilitate an integrated approach to the development, implementation and review of NRM activities. • 5 regional steering/advisory committees established/maintained to guide the development and implementation of key management strategies and plans. <p>Co-investment and leveraging opportunities actively identified and delivered through funding initiatives such as National Landcare Program, Our Catchments Our Communities, Threatened Species Initiative, Sustainable Irrigation, and Waterway Health.</p>
9.1.7 Implement and review the <i>Mallee Regional Landcare Support Strategy</i>¹.	<p>28 regional Landcare groups provided with ongoing coordination support.</p> <p>32 devolved grants provided to Mallee Landcare/community groups to support the delivery of local priorities.</p> <p>133 Landcare group members participating in 20 awareness raising/training events.</p>
9.1.8 Implement and review the <i>Mallee CMA Indigenous Participation Plan</i>².	<p>Continued effective function of the Mallee CMA Aboriginal Reference Group in fostering communications with Aboriginal stakeholders and providing input into regional initiatives and plans.</p> <p>12 Aboriginal On-Country visits supported.</p> <p>37 events (344 participants) facilitating Traditional Owner and Aboriginal community input into the development of key regional strategies/plans and the implementation of associated works programs. This included:</p> <ul style="list-style-type: none"> • Planning for the delivery of new funding initiatives (e.g. Commonwealth Regional Land Partnerships program and Victorian Biodiversity Response Planning projects). • Development of Victorian Mallee Irrigation Region Land and Water Management Plan and 2019-20 Seasonal Water Proposals.

¹ Appendix 2 details all outputs specifically delivered under Mallee Regional Landcare Support Strategy in 2017-18.

² Appendix 2 details all outputs specifically delivered under Mallee Indigenous Participation Plan in 2017-18.

Case Study

Community

The woma python was the star of the show when new members of the Sunraysia community took part in a knowledge-sharing workshop with the Mallee CMA.

While the event gave 20 participants from the Sunraysia Mallee Ethnic Communities Council the chance to come face-to-face with some native animals, it also provided an opportunity to talk about some unique aspects of the Victorian Mallee such as fishing in the Murray River, respecting cultural heritage and keeping our waterways healthy.

The event was funded through the Victorian Government's Our Catchments, Our Communities Regional Leadership

Grants. It's hoped that this event, and others like it, will help new members of the community understand more about the region and share their learnings with others.

This event was just one of the many hosted by the Mallee CMA, during 2018-19, which engaged more than 7600 stakeholders and broader community members in awareness, skill development and collaboration events.

The Mallee CMA takes community involvement seriously and looks forward to continuing to work in partnership with local residents to care for our land, water and biodiversity.



Introduction to Natural Resource Management event.

Community Condition

The Community Theme reports on the overall condition of both Community Capacity for natural resource management (NRM) and Culture and Heritage in the Mallee.

Community Capacity for NRM Benchmark

Historically, no regional-scale information has existed from which condition assessments of the Victorian Mallee community's capacity for natural resource management could be made. This information gap was addressed

as part of the Mallee RCS (2013-19) MERI framework through the development of a Regional Community Capacity Monitoring Tool. This tool provides a measurable and repeatable assessment of the condition of community capacity for natural resource management at a regional scale. It is based on the Rural Livelihoods Framework, which identifies Community Capacity for NRM as a combination of human, social, natural, physical and financial capital. Scoring criteria have been assigned to each measure identified across the five categories of capital. Based on the data, each measure is scored on a five-point scale, where one indicates 'low capacity' and five indicates 'high capacity'.

The Regional Community Capacity Tool was applied during 2012-13 to collect baseline data from which scores for each of the five capitals were assigned. This assessment indicated that, overall, our community has 'medium' levels of capacity for natural resource management in the region³. Re-application of the tool in 2018 identified that at a regional scale, community capacity has remained relatively stable over the 6

year period. There have been some fluctuations at the indicator level, however while all indicators of human and financial capital moved in a positive direction, two of the 5 social capital measures showed a slight decline; specifically the 'proportion of agricultural businesses with Landcare membership' and 'proportion of agricultural businesses participating in NRM projects or receiving funding' (see Figure 7).

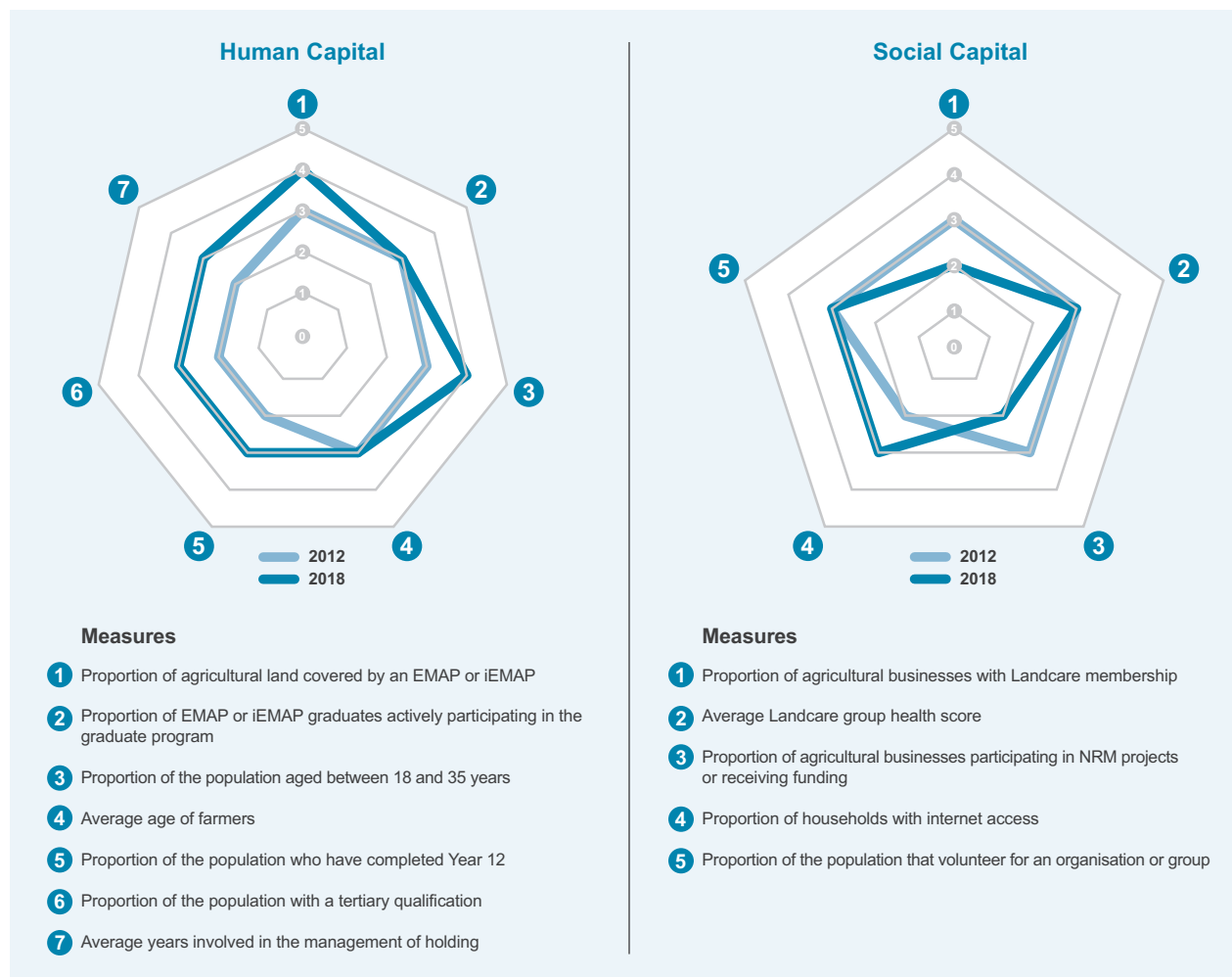


Figure 7 | Comparison of Regional Community Capacity Tool results between 2012 and 2018 (where 1 indicates 'low capacity' and 5 indicates 'high capacity')

Overall, in accordance with the underpinning theory of the Regional Community Capacity Tool, the results comparison between 2012 and 2018 demonstrates that the Mallee region has maintained a 'sustainable rural livelihood' during this time⁴.

A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base.



Such resilience in the face of stresses and shocks is key to both livelihood adaptation and the ability of the community to effectively manage the natural resource base for both production and environmental outcomes.

³ RMCG (2013) Mallee Regional Community Capacity for NRM: Detailed Condition Report

⁴ RMCG (2018) Mallee Regional Community Capacity for NRM: Detailed Condition Report

Community Capacity for NRM Assessment 2018-19

Community capacity for NRM in the Mallee is considered to be improving, with evidence that the activities delivered in 2018-19 will have a positive impact in the longer term.

Assessment	Previous 3 Year 	2018-19 
Summary of Evidence		
Significant number (7,695) of stakeholders and broader community members participating in 2018-19 awareness, skill development and collaboration events.		
Evaluations identified a high level of participant satisfaction in regards to the delivery of these events.		
Improvements in capacity being reported by stakeholders engaged through education programs (i.e. awareness raising), incentive/grants programs (i.e. knowledge and skill development); and by those participating in community advisory/reference groups.		

Reason for assessment

Evaluation surveys undertaken for all engagement activities as part of the Mallee CMA's Targeted Community Capacity for NRM monitoring tool provide assessments on their 'effectiveness' and some measures of community capacity. Key findings included:

- In 2018-19 there were 7,695 participants at some 670 individual engagement events (e.g. workshops, field days, meetings). Of those surveyed 73% rated the overall delivery of these activities as excellent, and 23% as good. In regards to their primary motivations for participating, 71% cited 'learning about a topic', and a further 12% as 'maintaining/strengthening social connections or professional networks'. Survey respondents also reported a 71% (average) increase in their awareness of specific NRM issues as a result of their participation.
- Members of Mallee CMA Community and Partnership Advisory Committees rated the overall delivery of information at their 2018-19 meetings as being excellent (67%) or good (33%). Opportunities to provide feedback were also rated highly (67% excellent, 38% good), with 96% reporting that they have a high level of confidence that the feedback and advice they provided was being listened to and acted on.
- Participants in Mallee CMA tender and incentive programs delivered over the past 5 years initially identify 'addressing priorities within my Farm Plan' (47%) as their primary reason for seeking support to undertake works. On completion, however, the 'desire to contribute to the general environmental management of the region' (39%) is the highest reported motivation. Participants also report increased awareness of key threatening processes, and an increase in their skills to implement associated mitigation actions.

- Community groups receiving grants in 2018-19 also reported an increase in awareness of actions that can be taken to reduce key threatening processes, and in their knowledge regarding implementation; particularly in regards to supporting regeneration processes and soil erosion management.

Culture and Heritage Benchmark

Information regarding culture and heritage sites has historically been gathered from a variety of sources including the local community, both anecdotally and from various publications and reports, through management plans, and government databases which are in turn compiled from a variety of sources. As such, the total coverage and current condition of cultural heritage sites within the region can be difficult to gauge as information on known sites are variable in quality and sites themselves continue to be identified through various processes.

As no regional scale baseline information currently exists on the condition of the region's Culture and Heritage Assets, proxy condition indicators have been established using the assumption that being listed on the relevant heritage register affords some level of protection; and that similarly, if sites are captured within a Co-Management Agreement or a Cultural Heritage Management Plan, the asset is being protected through associated threat mitigation activities.

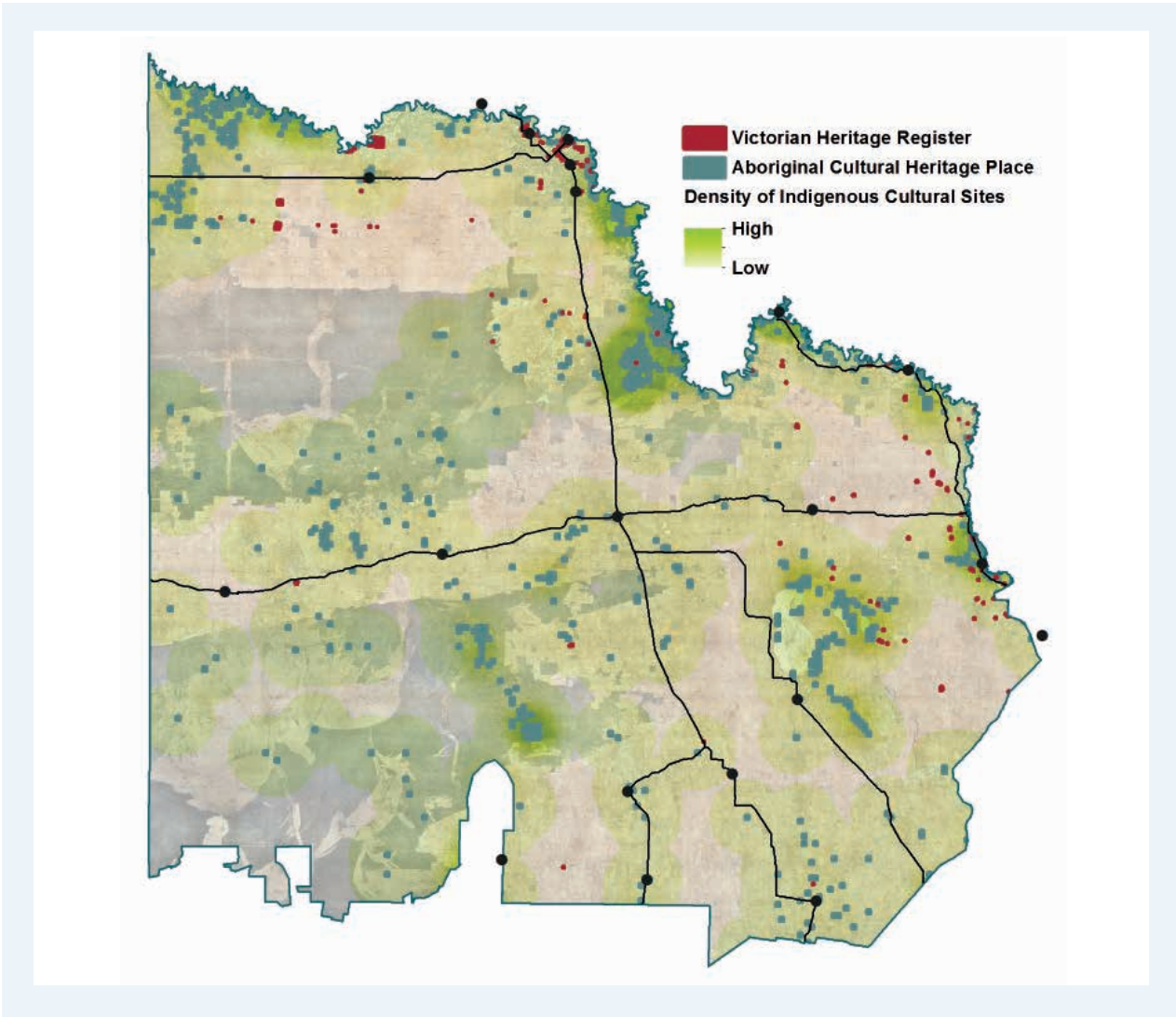


Figure 8 | Indicative Aboriginal and non-Aboriginal cultural heritage sites in the Mallee.

Culture and Heritage Assessment 2018-19

The condition of Culture and Heritage assets in the Mallee is considered to be improving; with evidence that the management actions delivered in 2018-19 will have a positive impact in the longer term.

Assessment	Previous 3 Year	2018-19
Summary of Evidence		
20 additional Cultural Heritage Management Plans (CHMPs) approved and lodged with Aboriginal Victoria in 2018-19.		
1 additional Registered Aboriginal Place, bringing the total to 4,435; and a further 199 components (e.g. hearths, burial remains, scarred trees) recorded on ACHRIS (6,031 total).		
No additional non-Aboriginal heritage sites were registered in 2018-19, evidence however of resources being allocated for the maintenance and restoration of a selection of the 536 sites.		

Reason for assessment

Twenty Cultural Heritage Management Plans (CHMPs) were approved and lodged with Aboriginal Victoria in 2018-19, bringing the total to 91. A further 3 Plans have been submitted for evaluation and 26 are in preparation. Collectively these Plans cover 38,148ha, a 3% increase from 2017-18, with 7 (covering more than 300ha) developed by Mallee CMA funded programs in 2018-19.

There are currently 4,345 Registered Aboriginal Places in the region, comprising 6,031 components and representing a 3% increase (199 components) from 2017-18. The additional component types recorded in ACHRIS throughout 2018-19 included hearths (20), burial remains (5), scarred trees (21), and shell deposits (18).

Non-Aboriginal heritage sites include historical infrastructure, cemeteries, national parks and reserves, and parks and gardens. In 2018-19 no additional sites were registered on the Victorian Heritage database and/or planning scheme heritage overlays; (526 in 2016-17). There is however evidence of resources being allocated

for the maintenance and restoration of a selection of the 536 existing sites. For example, Mildura Rural City Council is undertaking a comprehensive works program to repair the Mildura Wharf, an iconic landmark which dates back to when the riverfront was the centre of a thriving river trade.

Case Study

Cultural Heritage

Strong community partnerships continue to underpin work across the Victorian Mallee to ensure Aboriginal people are meaningfully involved in caring for our region's land, water and biodiversity.

Through recognising the value of Traditional Owners' knowledge, values and aspirations, the Mallee CMA has continued to demonstrate its commitment to working in partnership with Traditional Owners and members of the Aboriginal community.

Throughout 2018-19, the Mallee CMA has worked with Traditional Owners to host On-Country information sharing events, native fish releases, and undertake Aboriginal Waterway Assessments across the region.

Partnerships with Traditional Owners have made it possible for the Mallee CMA to lodge seven Cultural Heritage Management Plans (CHMP) with Aboriginal Victoria in 2018-19, covering 300ha.



Fish release at Horseshoe Lagoon.

Waterways

The Mallee contains some 1,600km of rivers/creeks and over 900 wetlands. Many of these waterways have been recognised as nationally and internationally important for the environmental, social, cultural and economic values they provide. This includes one Ramsar site (Hattah-Kulkyne Lakes); one Heritage River (Outlet Creek and Wirrengren Plain section of Wimmera River); and 16 sites listed on the Directory of Important Wetlands, Australia (e.g. Lindsay Island, Belsar Island, Kings Billabong, Lake Tyrrell and Raak Plain).

the Mallee's watercourses, wetlands, and associated riparian ecosystems and, in turn, the social, economic and environmental services that they provide to the community.'

Table 28 summarises the key activities that contributed to the RCS's six-year strategic actions for Waterway assets in 2018-19. Regional stakeholders engaged in the planning and delivery of these waterway related actions included Mallee CMA, DELWP, Parks Victoria, water authorities, local government, Landcare and other community-based NRM groups, members of the Aboriginal community, and private land managers.

Waterways Management

The RCS sets the long-term (20 year) objective for River and Wetland management in the Mallee as being 'to protect and enhance the environmental values of

Table 28 | Progress against RCS Strategic Actions for Waterways.

Strategic (6 Yr) Actions	2018-19 Progress
1.1.1. Review the Mallee River Health Strategy and the Mallee Wetland Strategy, and develop and implement the Mallee Regional Waterway Strategy⁵.	<p>Significant progress made against Mallee Waterway Strategy 2014-22 (MWS) targets, including:</p> <ul style="list-style-type: none"> • 48 sites receiving environmental water (5,467ML), covering 559 ha. • 100ha of native (indigenous) vegetation established. • 39 km of fencing/bollards installed. • 37 km of road/track rationalisation and repair works. • 3,310ha of weed control (primarily woody weeds). • 8,642ha of pest animal control (rabbits and feral pigs). <p>All on-ground works delivered in line with actions identified by MWS for individual waterway management units and Water for Victoria priority waterways, including:</p> <ul style="list-style-type: none"> • Merbein Common wetlands (Mallee CMA's flagship waterway project) • Lindsay-Wallpolla Islands • Belsar Yungera Floodplain complex • Kings Billabong and Woolong complex • Hattah-Kulkyne Lakes Ramsar site. <p>Ongoing application of the Regional Riparian Action Plan 2015-20 (RRAP), a Victorian Government initiative, has also accelerated on-ground riparian management works to improve the health of riparian land.</p> <p>A mid-term review of the MWS completed in February 2019 reported 2013-18 progress against regional priorities and established recommendations to inform future (2018-22) implementation, evaluation and reporting.</p>
1.1.2. Review, update and implement the Mallee Floodplain Management Strategy 2018-28 (FMS).	<p>Implementation of the Strategy commenced in 2018-19 following government approval and public release in April 2018.</p> <p>Delivery against the Regional Works Plan is coordinated by the regional FMS Implementation Steering Committee, with key achievements to date including:</p> <ul style="list-style-type: none"> • Commencement of several flood studies to address identified gaps in the region's knowledge base. This includes a detailed study of Murray River storm water and riverine flooding scenarios; and reviews/updates of Tyrrell, Lalbert and Yarriambiack Creek flood mapping. • Progressing approvals required for reconstruction of the Robinvale levee.

⁵ Appendix 2 details all outputs delivered under the Mallee Waterway Strategy in 2017-18.

Case Study

Waterways

Canoe launches, boat ramps, new walking tracks, all-weather access tracks and new camping areas are among the major on-ground works completed at Merbein Common and Lake Hawthorn as part of the Victorian Government's Regional Riparian Action Plan.

The works were coordinated by the Mallee CMA and form part of the four-year plan for two of the region's most loved recreational areas. Together, Merbein Common and Lake Hawthorn form one waterway management unit, which is one of the 10 flagship waterways prioritised for large-scale restoration through the Victorian Government's record \$222 million investment into waterway and catchment health.

During 2018-19 alone, seven new visitor facilities were installed (such as interpretive signs, picnic tables/benches, and shade sheds); woody weed control was conducted across more than 558 hectares, and pest animal control works were delivered across more than 964 hectares. In addition to this, in excess of 20km of non-arterial user-made

tracks were rationalised by installing 1.7km of bollards at strategic locations, which is allowing degraded areas of the floodplain to naturally regenerate with native vegetation, providing habitat for native fauna such as the Carpet Python and Growling Grass Frog.

All works have been directly influenced by community feedback and advice, with a robust engagement plan ensuring 155 people were involved in engagement events at these two sites during 2018-19. Community interest in the works has continued to be strong throughout the year, with social media posts about the works often attracting reaches in excess of 2,000 people.

Community groups such as the Friends of Merbein Common, Yelta Landcare Group, Mildura 4WD Club, and Cabarita Inc. have been heavily involved in the planning, prioritisation and delivery of works at both sites, and speak highly of the work completed to date.

"Since the upgrades to the environment at Cowanna Bend (Merbein Common), we have particularly noticed an increase in the number of aquatic bird species which is lovely to see. Most mornings it's like Tullamarine airport watching the birds go about their business. We feel the Mallee CMA has done a wonderful job and we are looking forward to watching the native plants and animals return to the area."

Testimonial from a resident who lives adjacent to Merbein Common.



Canoe launch at Merbein Common delivered as part of Mallee CMA's flagship waterway project.

Waterways Condition

The Waterways theme reports on the condition of both Rivers and Wetlands in the Mallee. As per the RCS mid-term review recommendation, consideration of these assets has been combined under the one headline theme.

Rivers Benchmark

Periodic assessments on the condition of Mallee waterways are conducted as part of the state-wide Index of Stream Condition (ISC) and Index of Wetland Condition (IWC) monitoring programs.

River/stream condition is measured by the ISC and measures condition according to five sub-indices (hydrology, physical form, streamside zone, water quality and aquatic life) that contain 23 key indicators, to provide a summary of the extent of change from natural or ideal conditions.

Assessments of river condition using the ISC were first conducted in 1999 and again in 2004 and 2010. In general, this monitoring has identified that no major changes have occurred to the condition of these waterways over this timeframe. Therefore, while no general improvement was detected, overall deterioration appears to have been controlled⁶.

This is an encouraging result given that the data collected in the third assessment period coincided with the end of the severe Millennium drought in south-eastern Australia. It is assumed that the targeted threat mitigation actions undertaken in the region over this period played an important role in minimising the impact of the drought and that they should assist with future improvements in condition under favourable climatic conditions.

The most recent (2010) ISC monitoring assessed 73 individual reaches in the region, with 4% of stream length identified as being in moderate condition and the remaining as being in poor (64%) or very poor (32%) condition.

A full report on Index of Stream Condition results is available at www.depi.vic.gov.au/water/water-resource-reporting/Third-Index-of-Stream-Condition-report.

Wetlands Benchmark

Wetland condition is assessed by the IWC according to six sub-indices (wetland catchment, hydrology, water properties, soils, biota, and physical form) that comprise 16 different measures. Monitoring is designed to identify significant changes in wetland condition from a theoretical reference condition (i.e. unmodified by human impacts associated with European settlement).

The IWC was applied in the Mallee between spring 2009 and autumn 2010 following a period of extended drought. Monitoring was conducted on 79 wetlands which were considered to be of high conservation value and a priority for management. Over half (53%) of the assessed wetlands were identified as being in good or excellent condition, 42% as being in moderate condition, and only 5% as being in poor or very poor condition.

It is also noted that although a high number of wetlands were assessed as being in good condition, there was a high level of variation evident in condition at the sub-index level. For example, 89% of wetlands were identified as having poor or very poor hydrology condition, while 96% had good to excellent physical form⁷.

Waterways Assessment 2018-19

Summary of assessment

Both long term and annual site based assessments of regional waterway assets generally indicate a condition trend of stable to improving; with evidence that management actions undertaken in 2018-19 will have a positive impact in the longer term.

Assessment	Previous 3 Year	2018-19
	↑	↑
Summary of Evidence		
Significant areas of inundation achieved through environmental watering (48 sites x 559ha in 2018-19) is having a demonstrable impact on waterway connectivity and both aquatic and riparian habitat condition.		
Over 12,000ha of targeted threat mitigation works (e.g. invasive plant and animal management) delivered in 2018-19 to further secure environmental outcomes achieved by recent watering events, and to protect priority riparian landscapes.		
Site based monitoring has identified reductions in threat incidence/impact and associated improvements in condition measures (e.g. native flora regeneration) resulting from these works.		

Reasons for assessment

Site-based assessments (both ongoing and annual) have identified improvements in the health of landscapes and associated species/communities where both environmental water and targeted threat mitigation activities are being delivered.

Environmental watering activities undertaken in 2018-19 continue to deliver habitat enhancement and waterway connectivity outcomes as demonstrated by:

⁶ Department of Environment and Primary Industries (2013), *Index of Stream Condition: The third benchmark of Victorian river condition*

⁷ Papas, P and Maloney, P (2012): Victoria's wetlands (2009- 2011): *state wide assessments and condition monitoring*

- Long-term monitoring (2006 to 2019) being conducted at the Hattah Lakes and Lindsay-Mulcra-Wallpolla Icon sites identified that several measured indicators of environmental condition (i.e. River Red Gum, Black Box, wetland and floodplain vegetation, lignum, cumbungi, fish and waterbirds) continue to improve as a result of water application and associated works programs; with progress against the stated ecological objectives (condition targets) for each of these indicators recorded in 2018-19⁸.
- Water availability in the form of both rainfall and flooding are key drivers of Hattah Lakes' plant community composition. The general positive temporal response pattern in monitored plant community metrics to flooding indicates that the system has benefited from the environmental water deliveries in 2014, 2016 and 2017/18. The timeframes over which this change occurs can however vary according to individual communities and metrics. For example, Black Box (*Eucalyptus largiflorens*) populations at Hattah Lakes have experienced an overall increase in tree health post environmental watering, with a positive effect on both crown density and broad tree health recorded in all years. Monitoring also indicated a weak positive effect of watering on crown extent in the three most recent monitoring events however, suggesting that there may be a substantial delay before an effect of environmental watering can be detected in crown extent⁹.
- Annual photopoint monitoring of priority wetlands, floodplains and creeks also provide important visual records to monitor changes in vegetation condition, structure and diversity in response to environmental water. Site based observations for Riverine and Wimmera Mallee Pipeline (WMP) connected wetlands in 2018-19 observed flushes of new growth in the over story canopies of associated vegetation, particularly black box; and an influx of extensive waterbird diversity and abundance^{10 11}.
- Lindsay-Mulcra-Wallpolla monitoring sites recorded more than double the highest number of fish identified by previous annual monitoring. The 2019 survey recorded over 75,000 fish, an increase which was primarily due to record numbers of bony herring and carp gudgeon as a result of a boom in recruitment, together with high numbers of other small-bodied species. With ten of the fifteen individual species identified being native, it is also noted however that non-native species continue to be highly represented in the overall population¹².
- 2018-19 monitoring of fish populations at Hattah indicated that while Murray cod were primarily captured from Riverine sites, for the first time over the duration of the monitoring program the species was also captured at Lake Mournpall. The population at Lake Mournpall had a higher abundance than they had previously been recorded from any other non-Riverine TLM site, demonstrating effective connectivity outcomes.



Aquatic vegetation flush following watering at Chiprick Reserve Wimmera Mallee Pipeline wetland.

⁸ Ecology Australia (2019) The Living Murray Condition Monitoring, Lindsay-Mulcra-Wallpolla 2018-19, Part A (Main Report) Draft

⁹ Moxham C., Duncan M., Leever D. and Farmilo B. (2019) The Living Murray Hattah Lakes Intervention Monitoring: Black Box reproduction and tree health – Annual Report 2019. Unpublished Report for the Mallee Catchment Management Authority. Arthur Rylah Institute for Environmental Research, Department of Environment, Land, Water and Planning, Heidelberg, Victoria.

¹⁰ Ecology Australia (2019) The Living Murray Condition Monitoring, Lindsay-Mulcra-Wallpolla 2018-19, Part A (Main Report) Draft

¹¹ Ecology Australia (2019) The Living Murray Condition Monitoring, Hattah 2018-19, Part A (Main Report) Draft

¹² Ecology Australia (2019) The Living Murray Condition Monitoring, Lindsay-Mulcra-Wallpolla 2018-19, Part A (Main Report) Draft



1 Lock 11 weir pool 2017-18 pre-treatment.
2 Lock 11 weir pool 2017-18 after one treatment.
3 Lock 11 weir pool 2017-18 after follow up treatment.

While the majority of the region's 'comprehensive' environmental watering monitoring programs are focused on the two TLM sites (Hattah and Lindsay-Mulcra-Wallpolla); this evidence base does support the assumption that positive outcomes are also being achieved at other watered sites. Given the scale and scope of environmental watering events delivered over the past three years, it is anticipated that the extent of these impacts is also relatively significant.

In 2018-19 over 12,000ha of targeted threat mitigation actions (e.g. invasive plant and animal management) were also undertaken to further secure the environmental outcomes achieved by these recent watering events and to protect priority riparian landscapes. Key observations regarding the impact of these works include:

- Targeted rabbit control programs are maintaining populations within priority riparian landscapes below the regional threshold level of <1 rabbit per spotlight km. For example, post treatment assessments in Hattah found no rabbit activity per spotlight km at 89% of the monitored sites¹³.
- The abundance of invasive plants at Hattah Lakes was the lowest recorded over the six-year monitoring period (2013-19)¹⁴. Targeted works to control invasive species were undertaken over the 2018-19 period with a high level of success. Extensive follow up works will however be required for longer term management outcomes¹⁵.
- Regeneration of native flora (e.g. River Cooba and River Red Gum) continues to be supported through the delivery of an extensive willow removal program along the Murray River. Follow up treatment of the 2017-18 control areas has built on the habitat improvement outcomes being achieved and provided significant progress towards the aim of achieving 100% eradication of active trees on the Victorian side of the Murray River from Merbein to Wallpolla (25km of river frontage) and from Nichols Point to Colignan (90km of river frontage).
- Evidence of increased pig damage to floodplain habitat in response to water availability has however been recorded by on-ground transect monitoring of Ramsar wetlands. The 2018-19 survey suggests that current level of pig disturbance is having a negative effect on lakebed herbland vegetation, in particular, on the average cover of lakebed herbland native vegetation, average flora species richness and the average number of eucalypt seedlings. While a range of control methods are being implemented (e.g. trapping, shooting) within priority landscapes, further efforts/resources are required to effectively manage this threat¹⁶.

¹³ Parks Victoria (2019). Spotlight Transect Scores - Hattah Area Autumn 2019

¹⁴ Moxham C., Gwinn D.C., Downe J. and Kenny S. (2019) The Living Murray Hattah Lakes Intervention Monitoring. Understorey Vegetation Program: Annual Report. Unpublished Report for the Mallee Catchment Management Authority. Arthur Rylah Institute for Environmental Research, Department of Environment, Land, Water and Planning, Heidelberg, Victoria.

¹⁵ Mallee CMA field staff observations

¹⁶ Moxham C., Gwinn D.C., Downe J. and Kenny S. (2019) The Living Murray Hattah Lakes Intervention Monitoring. Understorey Vegetation Program: Annual Report. Unpublished Report for the Mallee Catchment Management Authority. Arthur Rylah Institute for Environmental Research, Department of Environment, Land, Water and Planning, Heidelberg, Victoria.



Photos of recorded pig disturbance to the lakebed hermland at Lake Konardin (Left) and Lake Bitterang (Right).

Biodiversity

Just over half (2,047,645ha) of the region's native vegetation has been cleared since European settlement, particularly those vegetation communities growing on the more fertile alluvial soils (i.e. suitable for agriculture). Large contiguous blocks of terrestrial habitat do remain however, predominantly in large parks such as Murray-Sunset and Wyperfeld National Parks. Of the 1,872,233ha of remaining vegetation, only 12% occurs on private land.

This habitat supports a diverse and unique range of flora and fauna, with many species associated with the more arid interior having their southernmost distribution here. Several species are found nowhere else in Victoria; and many others are genetically distinct from their northern or southern relatives. Overall, the region contains 160 terrestrial and aquatic species which are listed as threatened at either Federal (27) or State (133) level; and 10 listed communities (4 federal and 6 state).

Biodiversity Management

The RCS sets the long-term (20 year) objective for Threatened Species and Communities management in the Mallee as being “to protect and enhance the present diversity of Mallee threatened species and communities”; and for Terrestrial Habitat as being “to protect and enhance the extent, condition and ecological connectivity of high value terrestrial habitat across all Mallee Land tenures”.

Table 29 summarises the key activities that contributed to the RCS's six-year strategic actions for Threatened Species and Communities and Terrestrial Habitat in 2018-19. Regional stakeholders engaged in the planning and delivery of these outputs included Mallee CMA, DELWP, Parks Victoria, water authorities, local government, Trust for Nature, Landcare and other community based NRM groups, Aboriginal community, and private land managers.

Table 29 | Progress against RCS Strategic Actions for Threatened Species & Communities and Terrestrial Habitat.

Strategic (6 Yr) Actions	2018-19 Progress
Threatened Species & Communities	
3.1.1. Continue to implement actions consistent with federal, state and regional prioritisation frameworks.	<p>Funding secured under the Victorian Threatened Species Initiative – Biodiversity Response Planning program to deliver against actions identified by statewide framework (Protecting Victoria's Environment – Biodiversity 2037) as being a priority for the Mallee. Targeted works implemented to support the recovery of 19 threatened species and 4 threatened ecological communities across eight priority landscapes:</p> <ul style="list-style-type: none"> • North West Woodlands • Wyperfeld Dunefields • Avoca Basin Terminal Lakes System and Creeklines • Cardross Lakes • Murray River Floodplain: Nyah to Robinvale • Hattah-Kulkyne Lakes System & National Park • Pink Lakes • Annuello <p>Funding secured under the Federal Government's Regional Land Program 'Threatened Species' and 'Threatened Communities' Services to deliver against actions identified by of Australian Government's Threatened Species Strategy (2015-20) as being a priority for the Mallee. Targeted works implemented to support the recovery of Malleefowl, Plains-wanderer and Buloke Woodlands.</p>
3.1.2. Continue to support the development, implementation and review of Action Statements and Recovery Plans for the region's threatened species and communities.	<p>Above programs supported significant delivery against priority management actions at both the individual species/communities and landscape scale, including the following¹⁷:</p> <ul style="list-style-type: none"> • 336ha of native vegetation established to enhance priority habitat. • 20km of stock exclusion fencing to protect and enhance priority habitat. • 322,617ha of pest animal control (rabbit, fox, feral cat, feral goat, and feral pig) and 119,954ha of weed control, to reduce critical threats to priority species/communities. <p>Limited opportunities to support the development or review of Action Statements/Recovery Plans in 2018-19.</p>
3.1.3. Support the implementation of ecologically appropriate burning regimes for protection of threatened species and communities.	Ongoing management and support provided by regional delivery partners (DELWP monitoring).
Terrestrial Habitat	
4.1.1. Review, update and implement the <i>Mallee Native Vegetation Plan</i>.	<p>No progress regarding review/update of <i>Mallee Native Vegetation Plan</i> - pending State Government direction.</p> <p>Ongoing delivery against regional priorities and management actions assumed (not actively monitored or reported at regional scale).</p>
4.1.2. Develop and implement a Regional Biolinks Plan to guide the delivery of cross-tenure habitat enhancement programs.	<p><i>Mallee Biolinks Plan</i> released June 2016 as part of the <i>Mallee NRM Plan for Climate Change (2016-19)</i>. Progress against priority actions achieved in 2018-19, included¹⁸:</p> <ul style="list-style-type: none"> • 127ha of native vegetation established to enhance priority linkages. • 3,811ha of weed control to protect and priority habitat linkages. • 4,689ha of pest animal control (rabbit) and 5km of stock exclusion fencing to reduce grazing impacts and support regeneration outcomes within priority habitat linkages. <p>Works delivered under the threatened species theme above (i.e. 3.1.2) also contributing to associated terrestrial habitat values.</p> <p>Priority Corridors targeted by 2018-19 delivery included:</p> <ul style="list-style-type: none"> • West Millewa (enhancing linkages between Murray River floodplain and north western Casuarina woodland remnants. • Western Central Mallee (enhancing linkages between Murray Sunset National Park and the Wyperfeld/Big Desert. • Eastern Central Mallee (enhancing linkages between Murray River floodplain and Avoca Basin). • Yarriambiack (enhancing linkages along Yarriambiack creek).

¹⁷ Appendix 2 details all outputs delivered under the broader Biodiversity theme in 2017-18.

¹⁸ Appendix 2 details all outputs delivered under the broader Biodiversity theme in 2017-18.

Biodiversity Condition

The Biodiversity theme reports on the overall condition of both terrestrial habitat and threatened species and communities (terrestrial and aquatic).

Threatened Species and Communities Benchmark

It is difficult to give a generalised picture on the condition of these assets given their fragmented nature within the Mallee landscape and the scope, scale and nature of associated indicators. Some populations of threatened species are comprehensively observed and reported on, while others remain somewhat cryptic due to insufficient resources or the nature of the species itself. Given the challenges associated with monitoring all threatened species and communities, proxy indicators are applied where available from which broad assumptions regarding the overall condition of these assets could be made, albeit often with a high degree of uncertainty.

Climatic factors can have significant impacts on the Mallee's biodiversity assets, with the ability of specific species/communities to respond to seasonal conditions an important consideration when assessing their condition. For example:

- Long-term monitoring of Malleefowl mounds in Victoria has shown breeding numbers in 2012 were higher than at any time in the past, in response to good rains and maturing habitat. Numbers have declined significantly over the following years however, as a result of ongoing dry winter conditions; with numbers at several Mallee sites in 2015 being lower than all but the drought year of 2002. Breeding numbers improved slightly in 2016/2017, but have declined substantially in 2018. Malleefowl breeding numbers still remain lower than most other seasons since monitoring began¹⁹.
- Five year monitoring (2011-2018) of representative sites across the Mallee found that the presence or absence of threatened floristic species are also strongly influenced by external factors, particularly the interaction between seasonal conditions and grazing pressure. While several new species have been recorded in ungrazed remnants over the 7 years, other species recorded in 2011 are no longer present. Given that grazing regimes have not changed over the monitoring periods, it is expected that the extended dry conditions experienced across the region is the key factor influencing the decline of some species²⁰.

Large bushfire events can also have a significant impact on the region's threatened species and communities. A key example of this is the loss of Black-eared Miner habitat after the 2014 Bronzewing Flora and Fauna reserve fire. This has reduced the range of this species to just one site in Victoria, Murray-Sunset National Park; making them extremely vulnerable to any future pressures²¹.

Further evidence of threatened species populations which are currently in decline within their constrained ranges include a study on the Arid Bronze Azure Butterfly which identified no evidence of the butterfly within the formerly occupied area of Pink Lakes. This suggests that the distribution of the butterfly may have contracted, with the remaining known populations restricted to Hattah-Kulkyne National Park and adjacent freehold land²².

It is also evident however that under favourable conditions, this declining trend may be reversed. For example:

- Following environmental watering of wetlands and a natural flood event at Ned's corner, a property owned by Trust for Nature, a 2017 survey discovered 15 previously unrecorded threatened flora species. Similarly, two listed flora species were recorded at Hattah Lakes for the first time in 2017-18. A population of 200+ plants of Slender Spurge, a species that has not been recorded in Victoria since 1982; and a population of around ten plants of Winged Plains-bush, representing a discovery of the first *Pluchea* species for Victoria and a massive range extension for the species (over 500km). An outcome which is largely attributed to the magnitude of recent flood events²³.
- A study of endangered Regent Parrots within the Hattah Lakes area identified 21 active nests following broad-scale environment watering with inundation across significant areas of the national park in 2014. Large numbers of Regent Parrots were also recorded constantly moving throughout and within the study area, supporting broader observations of many hundreds of Regent Parrots feeding in and near the Hattah-Kulkyne National Park in recent years. These findings followed the construction of regulators at important Regent Parrot breeding sites (Messengers and Oateys). Researchers concluded that the habitat disturbance associated with these works had been largely negated by subsequent environmental flows; with beneficial effects on bird abundance evident even after natural floodwaters receded in 2016²⁴.

¹⁹ Benshemesh J and Stokke P: Malleefowl monitoring in Victoria: 2012-13, 2013-14, 2014-15, 2015-16, 2016-17, 2017-18. Reports to the Victorian Malleefowl Recovery Group

²⁰ Kenny, S., Duncan, M., Leever, D. and Moxham, C. (2019) Quantifying the impact of land management practices on priority remnant vegetation across the dryland Mallee landscape monitoring program: five-year monitoring at a subset of 14 sites. Arthur Rylah Institute for Environmental Research, Department of Environment, Land, Water and Planning, Heidelberg, Victoria.

²¹ Boulton, R: Unpublished

²² Douglas, F (2012) *The distribution and conservation of the Arid Bronze Azure Butterfly in the Mallee area of north-western Victoria*. Unpublished report for the Mallee CMA.

²³ Moxham C, Kenny S, Fanson B (2018). The Living Murray Hattah Lakes Intervention Monitoring Annual Report 2018: Understorey Vegetation Program.

²⁴ Loyn, R. and Dutson, G. (2016b) Birds in Black Box woodlands in Hattah- Kulkyne NP 2016, with comparative data from Nangiloc and Kings Billabong. Final report from 2016 surveys. Unpublished report for the Mallee CMA by Eco Insights. (D17/6897)

Threatened Species and Communities Assessment 2018-19

Summary of assessment

Site based assessments of individual threatened species and communities indicate a stable condition trend, with evidence that management actions undertaken in 2018-19 may support future improvements should favourable climatic conditions occur.

Assessment	Previous 3 Year	2018-19
Summary of Evidence		
Evidence of an increase in population numbers/distribution of threatened flora and fauna species experiencing favourable conditions in 2018-19 (e.g. environmental watering).		
While much of the region experienced dry seasonal conditions in 2018-19, some evidence to support the expectation that the significant area of threat mitigation works undertaken (i.e. over 440,000 ha) will provide a basis for future improvements as favourable climatic conditions occur.		

Reasons for assessment

Long term site based monitoring (2013-19) identifies that individual species continue to respond to favourable conditions. For example, following environmental watering events at Hattah Lakes, the vulnerable Hardheads was recorded at an additional four sites for the first

time in 2018-19 surveys. Also, after being identified for the first time in many years by 2017-18 surveys, the Freckled Duck was recorded at two additional wetlands in 2018-19, indicating the species is responding well to favourable conditions.

Similarly, the Murray Hardyhead monitoring program highlighted an excellent result at the Koorlong wetland site in 2018-19 with a healthy population of nearly 2,000 individuals captured in fyke nets over one night of surveying. It is expected that this result was a response to adjustments which have been made to the sites watering regime, ensuring optimum conditions are achieved for the species.

With well below average rainfall experienced by most of the region in 2018, and low rainfall/high temperatures extending into the 2019 autumn period; the conditions provided to riparian habitat by environmental watering and associated increases in threatened species populations did not extend into the dryland region. It is however anticipated that the significant area of threat mitigation work undertaken within these terrestrial landscapes (i.e. over 440,000ha) will provide a basis for future improvements should favourable climatic conditions occur.

The impact of such works within terrestrial habitat was demonstrated by the first sighting of a Gile's Planigale at Ned's Corner Station for the first time in eight years. This followed the delivery of intensive pest plant and animal control programs to reduce completion, grazing and predation impacts.



South-eastern Long-eared Bat (*Nyctophilus corbeni*), Bat survey January 2019.

Case Study

Biodiversity

When it comes to Malleefowl, we're not fowling around. And thanks to local landholders around Wathe Nature Conservation Reserve, fox control works are helping ensure Malleefowl can continue to thrive.

Foxes predate heavily upon large numbers of native species, including the Malleefowl and the Little Pygmy Possum, both of which have been recorded in Wathe Nature Conservation Reserve. By working together, the Mallee CMA and private landholders adjacent to the reserve have undertaken fox control works across 2,639 hectares (ha) to help protect native species such as the Malleefowl.

In addition to this, partnerships between the Mallee CMA and Mildura Rural City Council, Yarriambiack Shire Council and private landholders delivered 2,524ha of rabbit fumigation works and 2,524ha of integrated weed control.

These important works were made possible through funding from the Victorian Government's Biodiversity Response Planning program, which is helping to ensure that Victoria's natural environment is healthy, valued and actively cared for.

The Mallee CMA also delivered priority works at a further eight ecologically significant sites in the region through funding from the Victorian Government's Biodiversity Response Planning program.



Fox control works help ensure Malleefowl continue to thrive.

Terrestrial Habitat Benchmark

Based on state-wide modelling (i.e. Site Condition Assessment and Patch-based Landscape Context Assessment), native vegetation quality across the Mallee is considered to be in better than average condition overall, with patches of habitat isolated in cleared landscapes typically in poorer condition. The DELWP NaturePrint model also determines the relative contribution of large blocks of vegetated areas in the region to biodiversity conservation in a statewide context to be generally high (Figure 9).

Trends in measures of condition within major parks and reserves remain stable, if not slightly improving, as a result of the removal of grazing over 20 years ago and some large rainfall events experienced in the region. This finding provides a good indication of the timeframe required for the recovery and restoration of Mallee habitats following the removal of grazing.

Within the more fragmented areas of the landscape, remnant vegetation subjected to interventions has also remained generally stable. Due to continuing threatening processes, declines in some measures of condition would however be expected within many remnants, especially those where threat mitigation actions have not occurred.

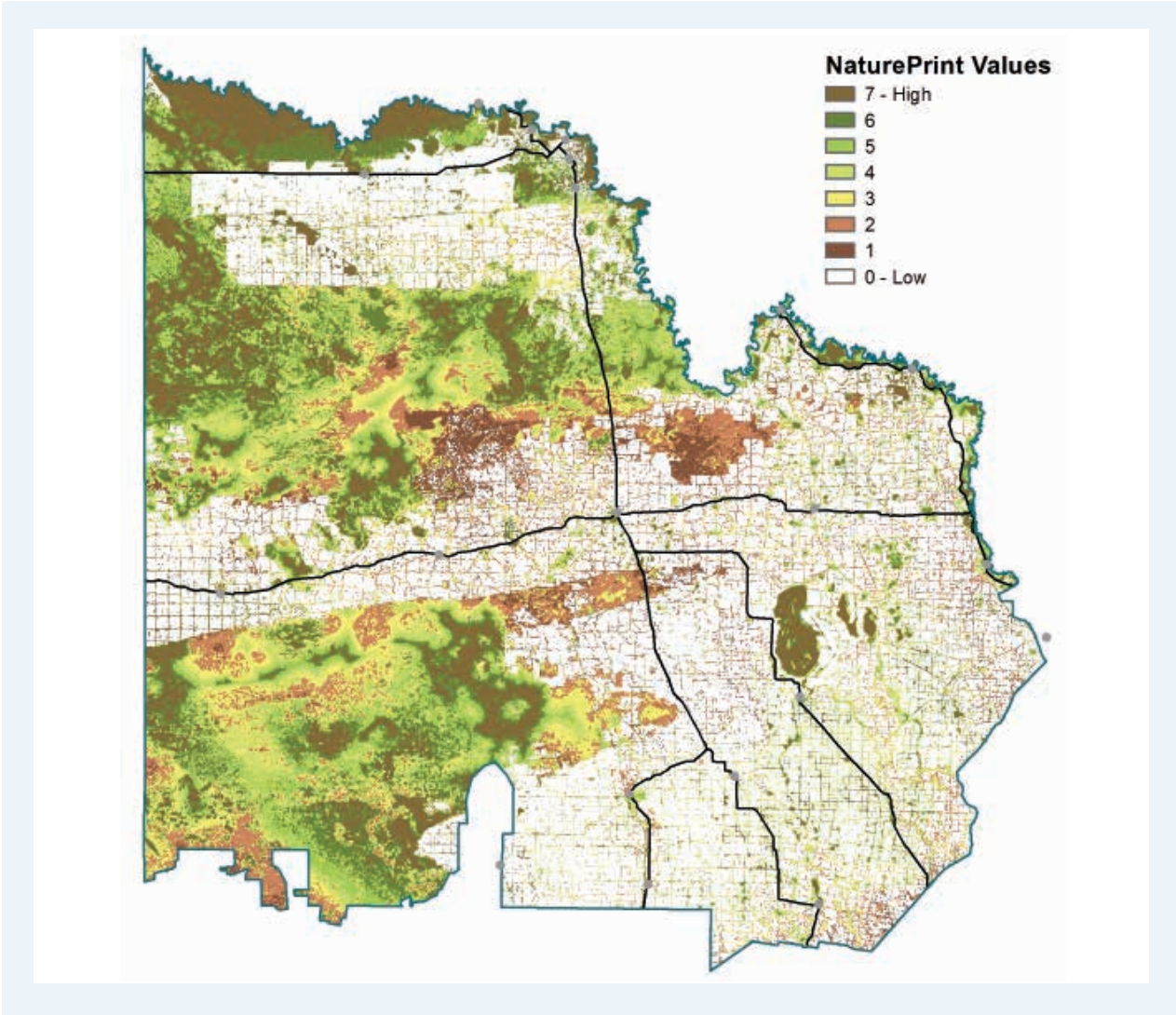


Figure 9 | Relative priority of Terrestrial Habitat Assets - NaturePrint Version 3 (State of Victoria 2014).

Terrestrial Habitat Assessment 2018-19

Summary of assessment

Monitoring of regional terrestrial habitat assets generally indicates a condition trend of stable to improving; with evidence that management actions undertaken in 2018-19 will have a positive impact in the longer term.

Assessment	Previous 3 Year	2018-19
Summary of Evidence		
Significant area of targeted works undertaken in 2018-19 to protect and enhance priority habitat (8,268ha); with the 440,000ha of works targeting threatened species/communities also expected to benefit the terrestrial habitat they were delivered in.		
Evidence of changes in the incidence of key threatening processes resulting from 2018-19 works programs. This included reductions in rabbit populations to <2 per ha (i.e. threshold required to support regeneration), and quantified decreases in extent and density of target weed species.		
Evidence of condition improvements as a result of these threat mitigation actions. This included improvements in habitat condition once grazing was removed (i.e. stock exclusion fencing); and evidence of ecological functionality returning to revegetated sites.		

Reasons for assessment

Significant areas of terrestrial habitat were targeted for threat mitigation actions in 2018-19, including: the establishment of 127 ha of native vegetation to enhance priority linkages, 3,811ha of weed control to protect priority habitat, and 4,689ha of pest animal control (rabbit) and 5km of stock exclusion fencing to reduce grazing impacts and support regeneration outcomes.

Further to this, the 4400,000 hectares of pest plant and animal control programs undertaken in 2018-19 to support the recovery of the region's threatened species and communities, also directly impacts the terrestrial habitat in which these works were delivered.

Site-based assessments (both ongoing and annual) have identified both a reduction in threat processes and associated habitat improvements resulting from these works.

Long term control programs in the Mallee continue to maintain rabbit numbers below the regional threshold of <2 per spotlight km required to support regeneration processes. In 2019, ongoing transect monitoring of rabbit activity within the Mallee's four remnant rangeland communities reported that 95% of the kilometres surveyed had 1 or less rabbits recorded²⁵. Site based monitoring of targeted control programs identified that pre-treatment rabbit numbers had an average of 1 rabbit/ha (range between >10 and 0 per hectare) and then an average of 0.5 rabbits/ha (range between >10 and 0 per hectare) post treatment²⁶.

Site based monitoring of weed control programs also recorded significant reductions in the extent and density of targeted species. In 2018-19 these species were primarily weeds of national significance (WoNS) such as African Boxthorn (*Lycium ferocissimum*), Wheel Cactus (*Opuntia robusta*) and Bridal creeper (*Asparagus asparagoides*). Across sites surveyed, there was a reduction in the average percentage of weed cover from 2% pre-treatment to 0% post-treatment across all sites surveyed.

Work to quantify the impact of stock exclusion fencing on the health of remnants has determined that natural regeneration is occurring across investment sites in all regions. Recruitment levels remain low at many sites however as the time since stock exclusion has increased, large shrub recruitment in the Southeast

increased, while there was no effect of time since stock exclusion on woody species recruitment (trees or large shrubs) for the Northwest or Southwest regions of the Mallee. A result which may reflect the extended period of below average rainfall being experienced in the region²⁷.

Overall, this work identifies that some recovery can be expected occur within 5 years of a patch of native vegetation being ungrazed, including increases in the total cover of native shrubs, litter, and native grasses. Low quality, recently fenced sites (<10 years) are expected to take longer to recover, however²⁸; and linear remnants, which are more prone to edge effects, require at least 10 years before the impacts of removing grazing can be quantified²⁹.

The appropriateness of undertaking re-vegetation activities as a targeted threat mitigation option is also being assessed by long-term monitoring programs in the region. Key observations include:

- Since monitoring commenced in 2011, 40% of tubestock are recorded as surviving, and 50% of directly seeded sites report germination. Whilst, some sites report low seedling survival rates, direct seeding outcomes at these sites have been successful.
- On average, 58% of tubestock are recorded as surviving after 12 months. This number reduces to 43% five years after establishment.
- Over the medium term (i.e. >5 years) revegetation sites are showing evidence of ecological functionality returning to the site. Specific changes recorded include: improved soil condition (i.e. reduced erosion); the absence of threats (e.g., kangaroos, rabbits and herbaceous weed); evidence of habitat utilisation (i.e. movement/utilisation of species primarily birds using these areas as corridors); and improved ecosystem function (e.g. evidence of natural regeneration).

²⁵ Parks Victoria (2019), unpublished data.

²⁶ Mallee CMA (2019), unpublished data.

²⁷ Moxham, C., Kenny, S., and Fanson, B. (2019) Determining recruitment responses of native woody species to stock exclusion fencing. Unpublished report for Environment and Community Programs, Department of Environment, Land, Water and Planning. Arthur Rylah Institute for Environmental Research, Department of Environment, Land, Water and Planning, Heidelberg, Victoria.

²⁸ Moxham, C. and Fanson, B. (2018). Market Based Incentive Programs: validating vegetation responses to management interventions: Decision Framework. Unpublished Client Report for the Environment and Community Programs, Biodiversity Division. Arthur Rylah Institute for Environmental Research, Department of Environment, Land, Water and Planning, Heidelberg, Victoria.

²⁹ Moxham, C. Kenny, S., and Duncun M. Arthur Rylah Institute for Environmental Research (2016); *Quantifying the impact of land management practices on priority remnant vegetation across the dryland Mallee landscape: five year monitoring report* for the Mallee CMA.

Land

Some 62% of the Mallee is under agricultural production, with an estimated 2.4 million ha of dryland farming and a further 78,775 ha of irrigation. The region produces up to 50% of Victoria's cereals, almost 100% of Victoria's dried vine fruits, 75% of Victoria's table grapes, 68% of Australia's almonds, 20% of Australia's wine grapes, and significant proportions of the nation's citrus, avocados, olives and vegetables crops. Mallee soils play an essential role in supporting these productive landscapes and the region's broader ecosystems.

Under the *Water Act 1989*, the land area over the Murray Group Limestone Aquifer was declared a Water Supply Protection Area (WSPA) in 1998. The subsequent implementation of the *Murrayville Area Groundwater Management Plan* (GMP) from 2001 and ongoing monitoring of groundwater levels, salinity and metered extraction provides detailed information on groundwater condition and trends.

Land Management

The RCS sets the long-term (20 year) objective for the Soil Regional Asset as being 'to protect and enhance the environmental values and ecosystem services provided by Mallee soils'; and for Agricultural Land as being "to optimise the productive capacity of Mallee agricultural landscapes, while minimising any adverse impacts of associated management practices (both current and historical) on our natural and cultural landscapes".

This headline theme also includes the Groundwater Regional Asset, for which the RCS set a long-term (20 year) objective of 'to protect the quality and availability of the Mallee's groundwater resource for current and future users'.

Table 30 summarises the key activities that contributed to the RCS's six-year strategic actions for Soils, Agricultural Land and Groundwater assets in 2018-19. Regional stakeholders engaged in the planning and delivery of these outputs included the DELWP, DJPR, NSW Office of Environment and Heritage, water authorities, local government, Landcare, community based NRM groups, Birchip Cropping Group, Mallee Sustainable Farming, and other industry groups, Aboriginal community, and private land managers.



Irrigated rockmelon crop at Robinvale.

Table 30 | Progress against RCS Strategic Actions for Soils, Agricultural Land and Groundwater.

Strategic (6 Yr) Actions	2018-19 Progress
Soils	
5.1.1. Develop and implement a Regional Soil Health Plan for the Mallee.	No progress regarding development of Regional Soil Health Plan.
Agricultural Land	
6.1.1. Continue to implement the <i>Victorian Mallee Irrigation Region Land and Water Management Plan</i> .	<p>Renewal of the <i>Land and Water Management Plan</i> progressed in 2018-19 (due for completion early 2020).</p> <p>Irrigation infrastructure works delivered under Mallee Irrigation Incentives program supported an estimated water use efficiency gain of 1,036 ML and a 3,312 tonnes/year reduction in salt to the Murray River. Works included³⁰.</p> <ul style="list-style-type: none"> • 582ha of irrigation infrastructure upgrades/conversions • 182ha of water use monitoring equipment • 1,071ha of systems checks • 23ha covered by irrigation drainage management plans.
6.1.2. Develop and implement a strategy for Mallee dryland agricultural land as part of the Regional Soil Health Plan.	<p>Mallee Dryland Sustainable Agriculture Strategy (2017-23) completed in partnership with regional partners. 2018-19 progress made against targets included:</p> <ul style="list-style-type: none"> • Targeted communication/engagement activities to improve awareness (and ultimately adoption) of alternative farming systems which have the potential to significantly enhance groundcover levels in the northern Mallee • Increasing awareness of farm practices influencing soil carbon • Developing a revised Mallee Soil Erosion and Land Use Monitoring Framework • Supporting the maintenance and data collection/collation requirements of two DustWatch nodes located within the region (Walpeup and Werrimull).
Groundwater	
7.1.1. Continue to implement the <i>Murrayville Groundwater Supply Protection Area Management Plan</i> .	Ongoing implementation actively monitored and reported (GWMWater).
7.1.2. Continue to implement actions from the <i>Western Region Sustainable Water Strategy</i> that apply to the Murrayville Groundwater Supply Protection Area.	Ongoing delivery against relevant actions assumed; not actively monitored or reported at regional scale.



Irrigation infrastructure works support water use efficiency on crops grown in the region.

³⁰ Appendix 2 details all outputs delivered under the *Victorian Mallee Irrigation Region Land and Water Management Plan* in 2018-19

Case Study

Land

Irrigation in the Victorian Mallee has increased by 40,825 hectares (ha) since 1997, with almonds remaining the most prominent crop type in the region.

The information comes from the latest Mallee Horticulture Crop Report, which aims to accurately measure irrigation status and development across the Mallee Catchment Management Authority (CMA) region. This report is produced every three years and helps inform land and water management planning, irrigation and drainage system modelling, and salinity impact modelling from new irrigation development.

The latest crop report was released in early 2019 and found the expansion of irrigation occurred predominantly in the private diverter river reaches where 39,940 ha of expansion occurred. From 1997 to 2018, the largest growth in irrigable

area occurred in the Boundary Bend and Wemen river reaches with expansion of 16,550 ha and 10,550 hectares respectively.

However, the report also shows irrigation redevelopment is occurring within the pumped irrigation districts, with 1,905 ha of new plantings being recorded in 2018.

Other key findings of the report include:

- The most prominent crop is almonds, covering 30% of the irrigable area;
- Drip irrigation is the most used system at 58%;
- The vast majority of irrigation development has occurred in the lowest salinity impact zones.

This project was supported by the Mallee CMA, through funding from the Victorian Mallee Salinity Management Program and the Victorian Government.



Almonds remain the Mallee's most prominent crop.

Land Condition

The Land Theme reports on the overall condition of both soils/agricultural land and groundwater resources that are utilised for production purposes (i.e. Murray Group Limestone Aquifer). For reporting purposes these are separated into two categories; dryland and irrigated.

Dryland Agriculture Benchmark

The Mallee Soil Erosion and Land Management Survey provides a long-term (1978 -2019) assessment of the condition of agricultural land within the dryland Mallee. Widespread changes in dryland agricultural management practices observed over the past 20 years continue to

dramatically reduce the risk, incidence and severity of soil erosion. The use of conventional fallow, for instance, has been reduced considerably, from between 30% to 50% of monitored sites in the 1990s to an average of less than 5% over the past five years - a practice change which has significantly increased vegetation cover, soil aggregation and overall soil stability. As a result, erosion risk remains relatively stable, with more than 80% of the 155 surveyed sites being classified as having a 'low' risk (*Mallee Soil Erosion and Land Management Survey, 2018*).

There has however been an increase in the use of break crops over the past five years. Break crops such as legume crops produce more fragile stubbles which are prone to faster decomposition than cereals and may increase erosion risk.

Organic Carbon (OC) is typically below one percent in Mallee soils but varies considerably (0.21% to 1.7%) across monitored sites according to their underlying soils texture (i.e. shifts from loam in the north to clay loam/clay soils in the south). A decline in median OC levels for all land systems has been observed from the 2010-2012 baseline assessments and while it is well documented that there is a temporal downward trend in OC levels in Australian cropping soils, OC can also vary within the season. Further monitoring is therefore required to determine if observed changes in OC as a soil health indicator is a long term trend or due to short term (seasonal) variation.

Dryland Assessment 2018-19

Summary of assessment

The condition of Soils and Agricultural Land (dryland) assets in the Mallee are considered to be generally stable. Some management practices employed within the northern part of the region in 2018-19 may have a negative impact on soil condition however.

Assessment	Previous 3 Year	2018-19
Summary of Evidence		
On average 88% of the region exceeded 50% groundcover (target) throughout 2018-19, a 9% decline from the previous year's average. Also evident however that the majority of dryland farmers continue to implement practices that reduce the risk and incidence of soil erosion.		
Some spatial variability evident in management practices and associated erosion risk, however, with the northern 'Millewa' land system recording an increase in conventional fallow. Groundcover in the Millewa remained consistently low throughout 2018-19 (e.g. 34% in January), influencing whole of region averages. Above average dust activity was also recorded at the Werrimull site in autumn.		
Ongoing dry conditions experienced throughout the region played a significant role in the low groundcover levels recorded at both the whole of region and individual landscape scale. This result would have been significantly worse however without the widespread changes in management practices that have occurred over past years.		
Further support required in the northern areas of the Mallee to accelerate the identification, validation and adoption of practices that promote increased groundcover and reduce erosion risk.		

Reasons for assessment

Evidence that the majority of dryland farmers implemented management practices to reduce the risk and incidence of soil erosion over the 2018 growing season is provided by the Mallee Soil Erosion and Land Management Survey conducted in April 2018. Specifically:

- Chemical fallowing was the most common paddock management practice and was implemented at 92% of sites. The remaining sites were represented by conventional fallow (5%), pastures (5%) and burnt stubble (1%)

- More than half the sites (57%) exceeded regional vegetative cover targets ($\geq 50\%$); with 21% of these having $> 70\%$ cover
- Majority of sites (88%) were classified as having low erosion risk (9% medium risk and 3% high).

Spatial variability in management practices and associated erosion risk was, however, identified by the 2018 survey. In the northern 'Millewa' land system, 15% of sites employed conventional fallow practices, 70% recorded 50% or less vegetation cover, and 40% were estimated to have a medium or high erosion risk (Table 31).

Table 31 | Monitoring sites (%) with an estimated erosion risk of low, medium or high across six Mallee land systems during late summer 2018. Erosion risk estimations are based on Leys et.al. (2002) Q value equation.

Land System	Erosion Risk %		
	Low	Medium	High
Boigbeat	100	0	0
Central Mallee	89	9	1
Culgoa	100	0	0
Hopetoun	96	0	4
Millewa	60	35	5
Tempy	90	0	10
Total	88	9	3

Groundcover observations demonstrate that despite well below average rainfall, between 95% and 98% of the region overall had more than the 50% groundcover throughout the 2018 winter and most of the spring. Following harvest, and over the 2018-19 summer period, groundcover declined substantially however, with only 57% of the region achieving the 50% cover target in January 2019 (Table 32). Mallee DustWatch sites recorded 18 hours of dust activity at Werrimull and 5 hours at Walpeup over the 2019 summer (representing moderate to high activity (DustWatch Report: NSW Office of Environment and Heritage, December 2018, January 2019 and February 2019)).

Table 32 | Percentage of the Mallee with more than 50% groundcover in 2018-19 as determined from MODIS (Source: NSW Office of Environment and Heritage, June 2019).

Month	Percentage	Month	Percentage
July 2018	98	January 2019	57
August 2018	98	February 2019	64
September 2018	95	March 2019	71
October 2018	89	April 2019	76
November 2018	78	May 2019	88
December 2018	62	June 2019	94

Leading into the 2019 cropping season, below average rainfall conditions continued with most sites receiving less than 20% of mean total rainfall in March and less than 10% of their April average. As a result, March groundcover was well below average for this time of year, with 71% of the region having more than the 50% target (Figure 10).

This result represents the end of a short term trend of increasing groundcover, with March records showing that 95% of the region achieving the 50% cover target in 2018, 95% in 2017, 88% in 2016 and 2015, and 80% in 2014 (March DustWatch Reports: NSW Office of Environment and Heritage).

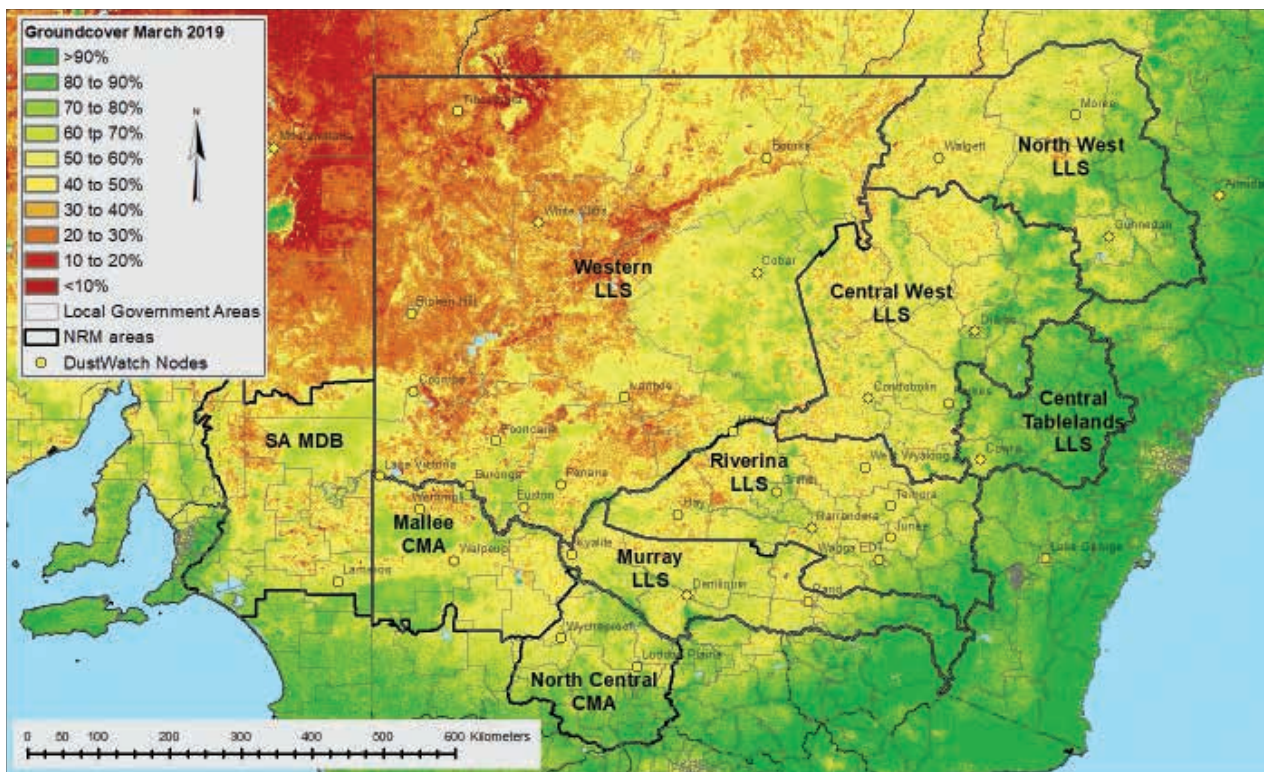


Figure 10 | Groundcover in March 2019 as determined from MODIS (NSW Office of Environment and Heritage, April 2019).

Increased dust activity was also recorded throughout autumn at the Werrimull site (33 hours), as a result of low groundcover and stronger than average wind conditions. Walpeup records remained relatively stable however 3 hours of dust activity (*DustWatch Report: NSW Office of Environment and Heritage, March, April & May 2019*).

Spatial variability in groundcover across the region has continued to be evident throughout 2018-19, particularly in regards to the Millewa area in the north of the region. The consistently low groundcover levels recorded here have influenced whole of region averages throughout the year, with the lowest cover (34%) recorded in January 2019, followed by 37% in February and 39% in March. Going into the winter, groundcover in the Millewa remained low with only 50% cover recorded in June; indicating a high erosion risk for an area containing land systems that already have a high to very high inherent susceptibility for wind erosion.

While ongoing dry conditions experienced throughout the region have played a significant role in the low groundcover levels recorded at both the whole of region and individual landscape (i.e. Millewa) scale; it is evident however that this result would have been significantly worse without the widespread changes in management practices that have occurred throughout the region over past years, and which continue to adapt in response to seasonal conditions. It is also evident however that further support needs to be provided to farmers in the northern areas of the Mallee to accelerate the identification, validation and adoption of practices that promote increased groundcover and reduce erosion risk.

Irrigated Agriculture Benchmark

Assessing land health condition in relation to irrigation principally relies on the region's established modelling platforms, which in turn directly rely on groundwater and surface water monitoring data inputs.

The Victorian Mallee has continued to receive strong irrigation development growth. Between 1997 and 2018 (for which comprehensive irrigation crop data is available³¹) irrigation development reliant on water from the Murray River has increased from 39,470ha to 78,775ha, effectively doubling the irrigable area. Irrigation development for the 3 years to 2018 increased by 6.5% or 4,800ha. For the corresponding period the area of vacant land (areas previously irrigated) reduced by 2.5% from 12,675ha to 12,360ha.

Since water entitlement unbundling in 2007, the amount of water issued for irrigation from the Murray River as an Annual Use Limit (AUL) has increased by more than 46%. Increasing from 518 gegalitres AUL in 2007 to 754 gegalitres AUL in 2019. This relates to the level of irrigation development.

Monitoring data suggests the long-term observed downward trend in drainage outfalls to the Murray River and its environs, and groundwater mounds beneath the older irrigation areas are continuing. Average Murray River salinity readings downstream of the Mildura Weir continues to show a downward trend. For each decade since the 1990's the average river salinity has reduced from 300 EC (1990s) to 175 EC (2000s) to 137 EC (2010s). The average salinity for 2018 was 127 EC³².

In relation to the Murrayville Groundwater Management Area (GMA), current levels of use are within the permissible consumptive volumes (11,005 ML/year) as defined by the Minister for Water in July 2017. While there has been some variability over recent years, it appears to be relatively stable for this non-renewable groundwater resource which is managed as far as practicable for long term sustainability, with groundwater levels recovering between irrigation seasons.

The 2017/18 irrigation season was the first year post implementation of the Murrayville GMA Local Management Plan. This plan describes a drawdown resource condition threshold of 0.65m per year. The trigger for management intervention is two successive years of drawdown greater than the threshold based on a five year rolling average. The threshold was not exceeded in any of the bore groups for 2017/18. Analysis of water levels in the key observation bores in the greatest use zone 10B-1 show that over the past 16 years the impact of extraction on seasonal groundwater levels based on a five year rolling average is less than the 0.65m threshold and demonstrating a recovering trend³³.

Irrigated Agriculture Assessment 2018-19

The condition of Irrigated Agriculture assets in the Mallee are considered to be stable to improving; with evidence

that management actions undertaken in 2018-19 will have a positive impact in the longer term.

Assessment	Previous 3 Year	2018-19
Summary of Evidence		
Increased adoption of best management practice by irrigators achieved an estimated 3,312 tonne/year reduction in salt loads to the Murray River and significant improvements in on farm water use efficiency.		
Long-term observed downward trends in drainage outfalls to the Murray River and its environs, and groundwater mounds beneath the older irrigation areas, continued in 2018-19.		
Metered extraction within the Murrayville GMA was 85% of the licensed volume for 2018, a 30% increase from 2017. Even with a high level of extraction the groundwater aquifer continues to demonstrate a recovering trend. Salinity levels also remained stable in 2018.		

Reason for assessment

Delivery of the Mallee irrigation incentives program for salinity benefit in 2018-19 supported the implementation of 31 individual works projects, delivering; 32ha of irrigation system upgrades, 1,000ha of systems checks, water use monitoring equipment installed across 40ha, and irrigation drainage management plans developed for 9ha. Collectively the salinity benefits (i.e. reduced irrigation recharge) achieved by these works is estimated to be a 3,312 tonnes/year reduction in salt to the Murray River.

A further 18 works projects were completed in 2018-19 by irrigators for improved on farm water use efficiency and subsequent reductions in groundwater accessions. These delivered 550ha of irrigation infrastructure upgrades, 71ha of systems checks, water use monitoring equipment across 142ha, and irrigation drainage management plans for 14ha.

Groundwater level measurements (688) taken in 2018-19 showed a slight overall decrease in standing water level across the entire Mallee CMA network compared with the previous year. Trend analysis completed from 2013 to present determined most of the bores showed no trend in either direction, neither rising nor falling. A small number of bores were trending toward a falling water level, more than the bores trending toward a rising water level. Groundwater salinity levels also demonstrated a slight overall decrease compared with the previous year. Trend analysis completed from 2013 to present determined that most of the bores showed no trend in either direction, neither increasing nor decreasing. A small number of bores were trending toward an increase in salinity however, more than the bores trending toward a decrease in salinity.

³¹ MCMA (2018), Mallee Horticulture Crop Report 2018

³² MDBA (2019), Mildura Weir downstream. (<https://riverdata.mdba.gov.au/mildura-weir-chaffey-grave-yard>, Accessed 26/07/2019)

³³ GWM Water. Murrayville GMA 2018 Annual Report.

In 2018, metered groundwater extraction (8,331ML) within the Murrayville GMA was 85% of the licenced volume, a 30% increase in use over the previous year and the highest since 2001. This increased extraction was due to extremely dry conditions. Three licensees

over used their license allocation which was investigated by Grampians Wimmera Mallee Water. Observations from the bore monitoring network indicate that the aquifer continues to demonstrate a recovering trend. Salinity levels also remained stable at monitored sites³⁴.



The Mallee CMA Bore Monitoring Program.

³⁴ GWM Water. Murrayville WSPA 2018 Annual Report

Part 1

Performance Reporting - Financial

Five year financial summary

The Mallee CMA's financial results for this reporting year and the previous four years are detailed in the table below.

Table 33 | Five year financial summary.

Five year financial summary	2018-19 \$'000	2017-18 \$'000	2016-17 \$'000	2015-16 \$'000	2014-15 \$'000
Revenue					
Commonwealth Government contributions	4,650	5,646	6,252	4,455	8,984
State Government contributions	7,181	7,293	6,530	7,194	6,575
Other revenue	3,962	4,055	3,142	6,064	4,287
Total Revenue	15,793	17,026	15,924	17,713	19,846
Expenditure					
Employee benefits expenses	4,957	5,000	4,789	5,250	4,546
Grants and Incentives	1,365	1,518	1,766	2,730	1,703
Other operating expenses	10,470	9,161	7,817	10,088	10,049
Total Expenditure	16,793	15,679	14,372	18,068	16,298
Assets					
Financial assets	41,544	41,990	40,933	38,997	40,376
Non-financial assets	738	953	1,152	1,224	864
Total Assets	42,282	42,943	42,085	40,221	41,240
Liabilities					
Current liabilities	1,565	1,286	1,672	1,616	2,282
Non-current liabilities	122	80	65	104	101
Total Liabilities	1,687	1,366	1,737	1,720	2,383

Current year financial review

The Mallee Catchment Management Authority (CMA) is financially sound, with adequate provisions in place to fulfil its obligations to staff, and replacement of plant and equipment. Sufficient resources are allocated to deliver the Corporate Plan business objectives which form the organisation's strategic direction for 2019-20.

Mallee CMA reported a deficit of \$982,521 (2018: surplus \$1,230,063) for the financial year. Assets exceed liabilities by \$40,595,887 (2018: \$41,578,407). Financial assets \$41,544,408 (2018: \$41,990,761) of which \$31,576,020 is held for Salinity Offset Funds (2018: \$30,466,349).

Significant changes in financial position

There were no significant matters which changed our financial position during the reporting period.

Significant changes or factors affecting performance

There were no significant changes or factors which affected our performance during the reporting period.



Fish sampling in Butler's Creek.

Disclosure of grants and transfer payments

The Mallee CMA has provided assistance to certain companies and organisations. Financial assistance provided in 2018-19 was as follows:

Table 34 | Disclosure of grants and transfer payments.

Organisation	Payments \$	Organisation	Payments \$
Victorian Landcare Program On-ground works that protect and restore the Victorian landscape.		Biodiversity Regional Hubs Pest plant and animal control, fencing and revegetation works.	
Hopetoun Landcare Group	15,000	3 Landholders	33,000
Kooloonong-Natya Landcare Group	15,000	Biodiversity Response Planning Pest plant and animal control	
Curyo-Watchupga Landcare Group	10,000	21 Landholders	163,345
Murrayville Landcare Group	7,212	Nyah District Golf Club	10,000
Millewa Carwarp Landcare Group	20,000	National Landcare Program – Regional Land Partnerships Pest plant and animal control, fencing, revegetation and stewardship works, stock exclusion fencing.	
Nyah West Landcare Group	10,000	Birchip Landcare Group	50,000
Waitchie Landcare Group	10,000	Waitchie Landcare Group	20,000
Culgoa Landcare Group	10,000	Hopetoun Landcare Group	19,000
Beulah Landcare Group	15,000	Nullawil Landcare Group	60,000
Mallee Landcare Group	20,000	3 Landholders	35,613
Nullawil Landcare Group	17,000	Nyah to SA Border Incentives System checks, scheduling (technology improvements).	
Ultima Landcare Group	10,000	3 Landholders	47,891
Sea Lake Landcare Group	10,000	Salinity Offset Fund Irrigation Incentives, including system checks, scheduling, system upgrades and irrigation drainage management plans.	
Oz Fish Unlimited	13,000	22 Landholders	126,401
Manangatang Landcare Group	15,000	TOTAL	
Millewa Carwarp Landcare Group	8,800		1,484,191
Murrayville Landcare Group	10,000		
Kooloonong - Natya Landcare Group	9,091		
1 Landholder	10,000		
Victorian Waterway Management program Pest plant and animal control, habitat mapping and track restoration.			
Oz Fish Unlimited	35,000		
Nyah - Nyah West United Football and Netball Club Inc.	15,000		
3 Landholders	48,600		
Nyah District Lions Club	45,000		
Our Catchments Our Communities Pest plant and animal control, fencing, revegetation works and track maintenance.			
Nullawil Landcare Group	72,591		
Tchum Lake Aquatic Club	65,000		
Culgoa Development Group Inc.	30,000		
Green Lake Committee of Management	40,000		
20 Landholders	166,852		

Subsequent events

There were no events occurring after the balance date which may significantly affect the Mallee CMA's operations in subsequent reporting periods.

Part 2

Governance and Organisational Structure

Organisational structure and corporate governance

The organisational and governance structure of the Mallee CMA (Figure 12) provides a framework for the integrated and effective management of the region's key assets. This structure allows for efficient program planning across all areas of operation and the sharing of resources, where possible, with partner agencies and the community.

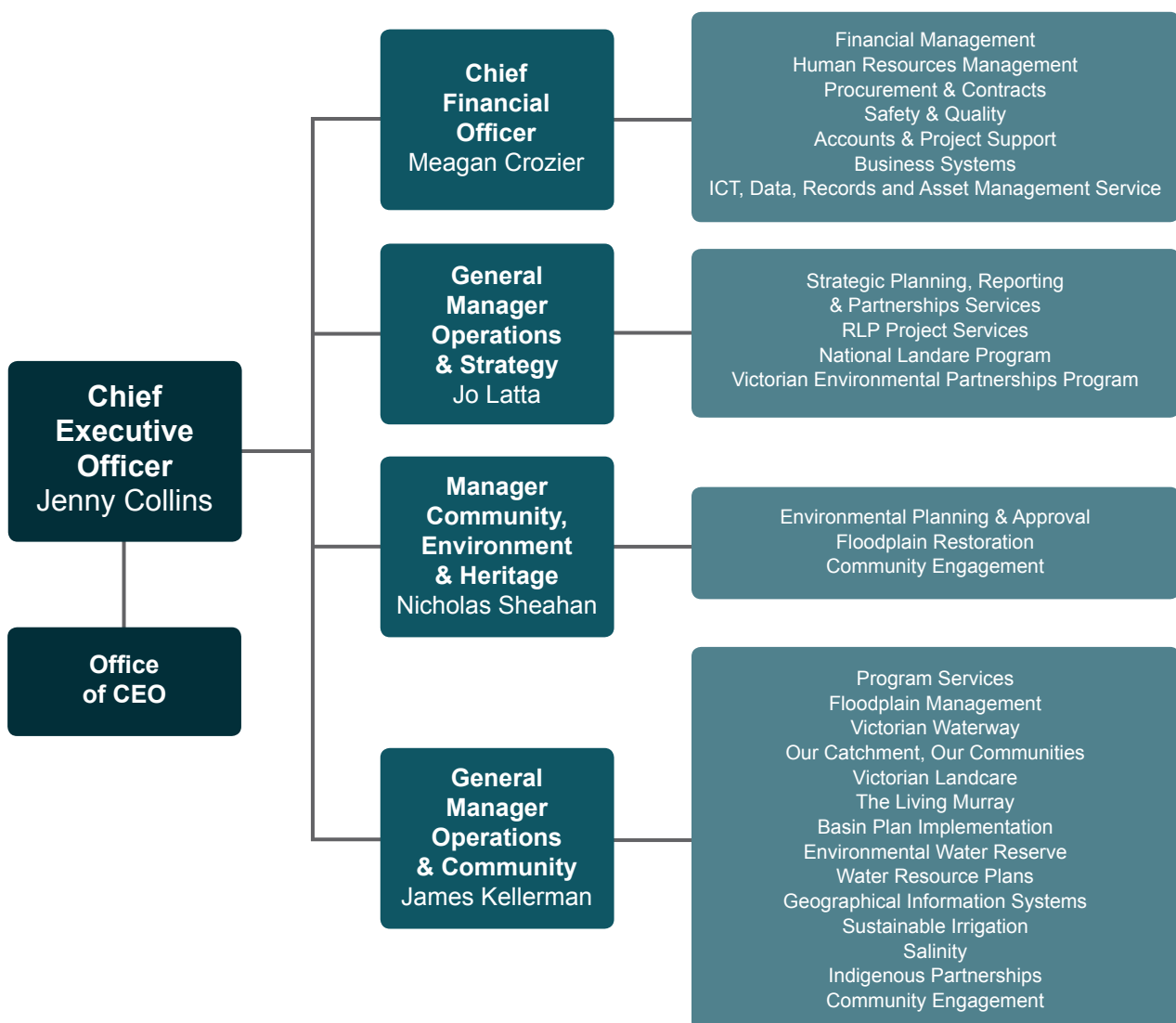


Figure 11 | Mallee CMA organisational structure 2018-19.

Opportunities for stakeholder involvement in priority setting and funding allocations for natural resource management in the region is enhanced through various advisory committees, comprising Board, agency and community members (see Figure 12).

The Mallee CMA Board sets governance level policies and establishes the organisation’s vision, strategic directions and business objectives. The Board is ultimately responsible

for all functions undertaken by the Authority and consists of up to nine members appointed by the Minister.

A number of sub-committees, including an Audit Committee, Remuneration Committee and a Salinity Accountability Advisory Committee have been established by the Board to advise on specific areas of responsibility.

Additional sub-committees are convened as necessary to ensure continued effective governance and performance.

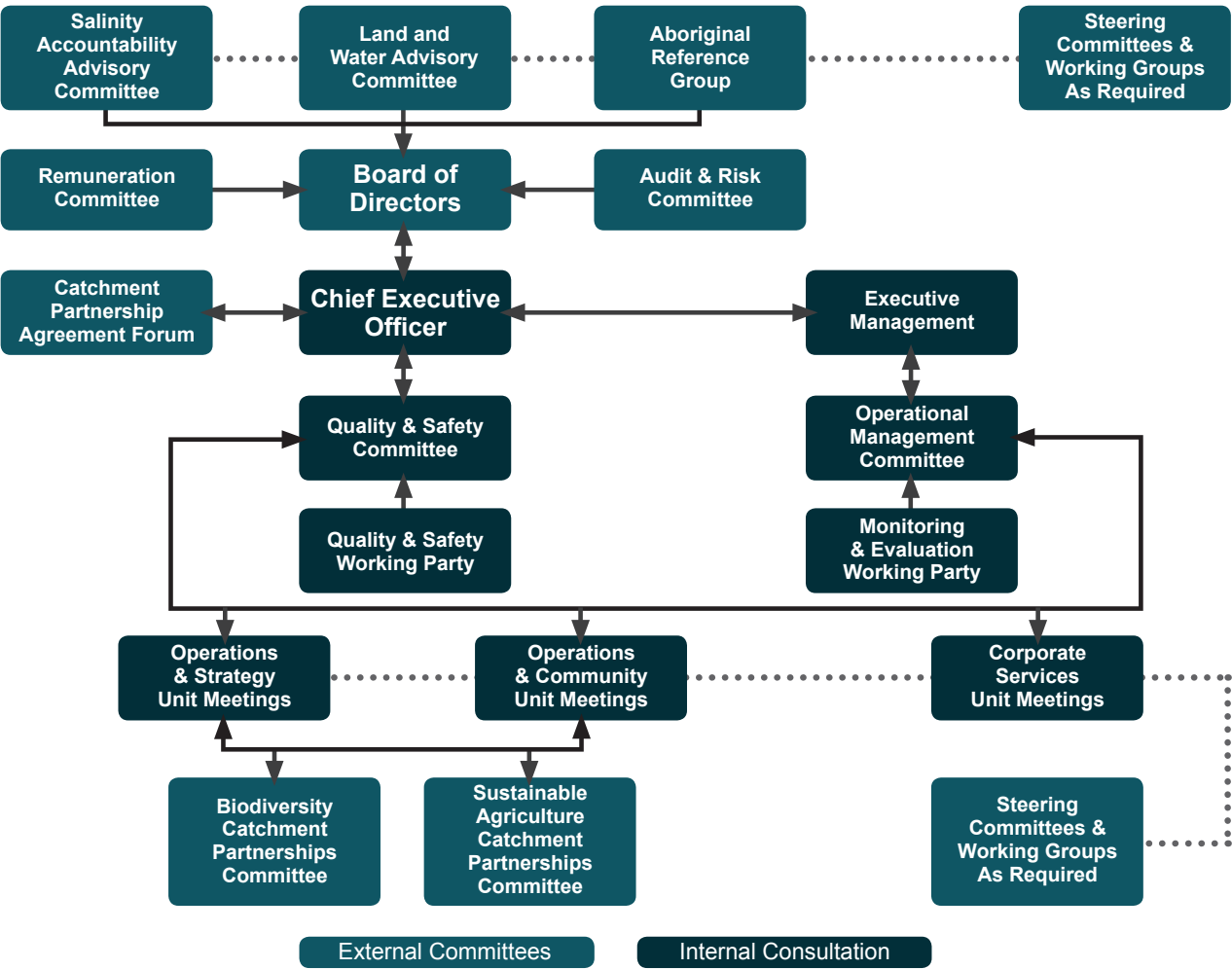


Figure 12 | Mallee CMA organisational and governance structure 2018-19.

Governing Board

The current Board represents a wide range of interests across the Mallee region, including: agricultural; economic; horticultural; financial auditing; law; risk management; governance; environmental issues; and human resource

management. As part of their responsibilities, each Board member has a specific leadership role reflecting their individual area of expertise. Through this leadership role, a strong governance culture is realised that enables a measured and strategic approach to all business undertaken by the Mallee CMA.

Governing Board members

Sharyon Peart - Chair

Sharyon moved from Melbourne to the Mallee in 2003, where she lived on a large citrus, dried fruit and wine grape growing property at Nangiloc.

Sharyon's background in corporate business, sales, marketing and team management gave inspiration to the small business Sharyon currently owns and operates. She has been the sole director since she created the company in 2005, specialising in retail consultation, and managing women's health and wellbeing.

Sharyon served on the Mildura Rural City Council as a Councillor for nine years and gained much experience as portfolio councillor for art and education, later community services and wellbeing, and governance and finance.

Sharyon is committed to strengthening partnerships between community and government in the sustainable management of resources across our region.

Sharyon is a member of the La Trobe University's Mildura Regional Advisory Board; Deputy Chair, Lower Murray Water; a member of the Victorian Agricultural Advisory Council and a Victorian CMA representative on the Resilient Cities and Towns Reference Group.

Sharyon currently represents the Mallee CMA as:

- Chair - Mallee CMA Remuneration Committee;
- Member - Mallee CMA Aboriginal Reference Group (ARG); and
- Chair - Victorian Catchments.

Sharyon was a board member during the reporting year with her current term of appointment being from 01 October 2017 to 30 September 2019.

Dr John Cooke DSc (hc), PhD - Deputy Chair

John was born in Ouyen and grew up on a Mallee wheat/sheep farm. Before retiring in 2013, John served as an extension officer, research scientist, manager and internal consultant.

As a research scientist, John led investigations of tillage systems for red/brown and Mallee soils in northern Victoria. He was the lead or sole author of 5-refereed papers, and numerous conference papers.

As a manager, John was responsible for land protection in the Mallee and other key issues across northern Victoria. John's involvement in waterway management has covered issues relevant to land tenure, reclamation, water quality and salinity, habitat protection and wetland watering programs. John also contributed significantly to land and water management across the southern Murray Darling Basin.

John is Chairperson of the Regional Advisory Board for the Mildura Campus of La Trobe University, and is a member of the Board of Mallee Family Care.

In recognition of his contribution to natural resource management and community involvement in northern Victoria, John was awarded an honorary Doctorate of Science by La Trobe University in 2015.

John currently represents the Mallee CMA as:

- Deputy Chair - Mallee CMA Board; and
- Member - Salinity Accountability Advisory Committee.

John was a board member during the reporting year with his current term of appointment being from 01 October 2017 to 30 September 2021.

Tony Martin

Tony Martin is a horticulturist who has been involved in natural resource management in the Mallee and Murray-Darling Basin for more than 30 years.

Tony is a member of the Australian Institute of Company Directors and Dried Fruits Australia.

Tony currently represents the Mallee CMA as:

- Chair - Salinity Accountability Advisory Committee; and
- Member - Mallee CMA Audit Committee.

Tony was a Board member during the reporting year with his current term of appointment being from 01 October 2015 to 30 September 2019.

Allison McTaggart

Allison is the principal consultant at Allison McTaggart and Associates, a human resources and business consultancy business. Allison's consultancy work includes strategic planning, governance, recruitment, training, corporate communications, and workplace health and safety.

Allison is a Director of Western Murray Irrigation and her family owned earthmoving business. Allison was a Director of Mallee Sustainable Farming up until 30 June 2018 and chaired the Murray Primary Health Network Community Consultative Committee over the past three years. Allison formerly held roles with the Australian Table Grape Association as the Manager for Communications and Industry Analysis and the Murray Primary Health Network as a Workforce Development Officer.

Allison's background includes over ten years as a Human Resource Manager in agribusiness, extensive work in public relations, marketing and workforce development.

Current memberships include: Australian Human Resource Institute; Governance Institute of Australia; Institute of Community Directors Australia; Australian Institute of Company Directors fellow; and Australian Information Security Association.

Allison holds a Bachelor of Arts (Management Communication) and an Associate Diploma (Animal Production).

Allison currently represents the Mallee CMA as:

- Chair - Audit and Risk Committee;
- Member - Remuneration Committee.

Allison was a Board member during the reporting year with her current term of appointment being from 01 October 2017 to 30 September 2021.

Geoff Anderson

Geoff is a dryland farmer from the central Mallee town of Ouyen. Over his extensive farming career, spanning more than 50 years, Geoff developed a keen interest in the balance between production and ecology. Geoff has been involved in all aspects of improving dryland agricultural and environmental land management, including salinity management.

Geoff was first appointed to the Board in 2006, after ten years on the Mallee CMA Land Advisory Committee.

Geoff currently represents the Mallee CMA as:

- Member - Remuneration Committee.

Geoff was a Board member during the reporting year with his current term of appointment being from 12 November 2016 to 30 September 2019.

Kellie Nulty

In addition to being a partner in a dryland farming operation at Carwarp, Kellie has a strong background in accounting and auditing. Kellie has worked as a practising accountant for more than 20 years.

Kellie has extensive internal and external auditing experience across a variety of industries. Her fields of expertise include: management and financial accounting; information technology; risk management; corporate governance; project management; and business consultancy.

Kellie is a Chartered Accountant, Registered Company Auditor, Registered Superannuation Fund Auditor, and holds degrees in both Business and Computer Science.

Kellie currently represents the Mallee CMA as:

- Member - Land and Water Advisory Committee.

Kellie was a Board member during the reporting year with her current term of appointment being from 12 November 2016 to 30 September 2019.

Robert Matthews

Having grown up on the family farm at Meringur, Robert has been involved in dryland wheat and sheep farming his whole life. After 13 years in the Commonwealth public service working in employment counselling, Robert returned to full time farming in 1998.

With a keen focus on all areas of natural resource management, combatting soil erosion, resource efficiency and the further development of biological farming methods are major priorities for Robert.

Robert is currently serving as: Director of the Red Cliffs Association Board; Secretary of the Koorlong Hall committee; and member of the Mallee Natural Food Group Board. Robert is also the sole director of Kurnwill Quarries.

Robert currently represents the Mallee CMA as:

- Member - Land and Water Advisory Committee; and
- Member - Salinity Accountability Advisory Committee.

Robert was a Board member during the reporting year with his current term of appointment being from 01 October 2017 to 30 September 2021.

Jacquelyn Turfrey

Jacquelyn is a barrister and an accredited mediator, and has been practicing law for almost 20 years. She holds a Graduate Diploma in Equal Opportunity Administration and a Bachelor of Laws LLB (Hons) from the University of Melbourne.

Jacquelyn was an independent non-executive director of Aboriginal Housing from 2006 to 2016 and Worawa Aboriginal College from 2016 to 2017.

Jacquelyn brings extensive experience from the financial services sector where she was in-house counsel; a company secretary; and a director of a number of National Australia Bank subsidiary entities. Jacquelyn was in a leadership role in global banking risk management and governance. Experienced in State and Commonwealth government and private legal practice. Jacquelyn spent three and a half years at senior executive level in the Victorian Public Service.

Jacquelyn brings unique experience and understanding gained from working across government, corporate, private and not for profit sectors. Jacquelyn has worked in Perth in the mining industry and represented the Yawuru Native Title holders in settlement negotiations with the Western Australian Government. Jacquelyn established company structures, frameworks and operations for entities associated with the Yawuru Corporate Group, including acting as Chief Executive Officer for a period of time.

Jacquelyn currently represents the Mallee CMA as:

- Member - Audit and Risk Committee; and
- Proxy - Aboriginal Reference Group.

Jacki was a Board member during the reporting year with her current term of appointment being from 01 October 2017 to 30 September 2021.

Board meetings attended

Eleven Ordinary Board Meetings (OBMs) were held during the 2018-19 financial year. The Board Chair approved all Board member absences during the reporting period.

Table 35 | Board membership, terms and meeting attendance 2018-19.

Board Member	Appointed	Appointment review	Eligible meetings	Attended meetings
Sharyon Peart	01 October 2017	30 September 2019	11	11
John Cooke	01 October 2017	30 September 2021	11	8
Allison McTaggart	01 October 2017	30 September 2021	11	11
Tony Martin	01 October 2015	30 September 2019	11	10
Geoff Anderson	12 November 2016	30 September 2019	11	11
Kellie Nulty	12 November 2016	30 September 2019	11	9
Robert Matthews	01 October 2017	30 September 2021	11	11
Jacquelyn Turfrey	01 October 2017	30 September 2021	11	8

Audit and Risk Committee membership

The Audit and Risk Committee consisted of the following members in 2018-19:

- Allison McTaggart, Mallee CMA Board Member (Chair)
- Tony Martin, Mallee CMA Board Member
- Jacquelyn Turfrey, Mallee CMA Board Member
- Grant Martinella, Independent Member (as of 13 May 2019 extension of appointment to 30 April 2020)
- Inga Dalla Santa, Independent Member (as of 13 May 2019 extension of appointment to 30 April 2020)

The role of the Audit and Risk Committee (ARC) is to oversee and advise the Mallee CMA on matters of accountability and internal control affecting its operations. Key responsibilities of the audit committee include the oversight of:

- Financial performance and the financial reporting process, including the annual financial statements;
- The scope of work, performance and independence of internal audit;
- The scope of work, performance and independence of the external auditor and maintain effective communication (including the Auditor General and the Auditor General's duly appointed agents and representatives);

- The operation and implementation of the risk management framework;
- Matters of accountability and internal control affecting the operations of the Mallee CMA;
- The effectiveness of financial management systems and other systems of internal control;
- Review of Governance Policies;
- The Mallee CMA's process for monitoring compliance with laws and regulations and its own code of conduct and code of financial practice; and
- Review information in the report of operations on financial management, performance and sustainability before it is released to Parliament.

The Mallee CMA Board appoint the ARC members annually and endorse external ARC members for three year terms with extension of up to a further three years.

Meetings are held monthly, and at any other time on request of a committee member or the internal or external auditor. In the reporting period 2018-19, the committee met 11 times. Attendance of committee members is detailed in the table below.

Table 36 | Audit and Risk Committee membership, terms and attendance 2018-19.

Member	Appointed	Appointment review	Eligible meetings	Attended meetings
Allison McTaggart	25 October 2017	30 September 2021	11	11
Tony Martin	25 October 2017	30 September 2019	11	9
Jacquelyn Turfrey	25 October 2017	30 September 2021	11	7
Grant Martinella	14 December 2015	30 April 2020	11	8
Inga Dalla Santa	24 February 2016	30 April 2020	11	10

Board committees

The Audit and Risk Committee, Remuneration Committee, Salinity Accountability Advisory Committee, and community committees of the Board act on the Board's behalf, as deemed necessary. Appropriate advisory committees ensure projects are properly guided and that funds are spent wisely.

Remuneration Committee

The primary purpose of the Remuneration Committee is to assist the Board to discharge its responsibilities by managing the employment cycle of the Chief Executive Officer (CEO), which includes:

- Encompassing the full employment cycle from advertising to contract negotiation, employment performance management and end of tenure;
- Succession planning for the role in accordance with organisational policy;
- Induction for the CEO and Board members;
- Learning and development for the CEO and Board members;
- Endorsing CEO backfill arrangements for periods of leave exceeding two weeks, up to and including six weeks; and
- Annually reviewing Government Sector Executive Remuneration Panel (GSERP) and Office of Public Sector Executive Remuneration (OPSER) contracts.

The Remuneration Committee achieves this by providing the following services on behalf of the Board:

- Ensuring reporting disclosures related to remuneration meet Board disclosure objectives and relevant legislative requirements;
- Coordinating the Annual Board Assessment in accordance with DELWP guidelines;
- Conducting the Audit and Risk Committee annual self-assessment and three year formal review, as per Ministerial Standing Directions;
- Ensuring all reviews incorporate relevant changes to the internal and external environment;
- Ensuring procedures for agendas, minutes and reporting to the Board are adhered to; and
- Ensuring records are managed securely and in accordance with Public Record Office Victoria principles.

Members of the Remuneration Committee during the 2018-19 reporting period were:

- Sharyon Peart (Chair), Board Chair;
- Allison McTaggart: Board Member, Audit and Risk Committee Chair; and
- Geoff Anderson, Board Member.

The Remuneration Committee met twice during the 2018-19 reporting period.

Salinity Accountability Advisory Committee

The Salinity Accountability Advisory Committee (SAAC) is pursuant to the Mallee CMA's obligations under the *Catchment and Land Protection Act 1994* and delegated responsibilities under the *Victorian Water Act 1989*.

The prime responsibility of the SAAC is to provide advice to the Mallee CMA Board on:

- All matters relating to Accountable Actions under Schedule B of the Murray-Darling Basin (MDB) Agreement at the regional level;
- The management and maintenance of the Mallee Regional Salt Register; and
- Administration of the Salinity Offset Charges, which are collected to specifically offset Nyah to the South Australian (SA) Border Irrigation Development salinity impact.

The SAAC is not a decision-making body. In broad terms, the committee allows detailed attention to be given to particular matters, and then makes recommendations to the Mallee CMA Board for consideration. The committee may seek specific advice from stakeholders in relation to matters under review before making recommendations to the Board.

Members of the SAAC during the 2018-19 reporting period:

Mallee CMA representatives:

- Tony Martin - SAAC Chair, Board representative (OBM No. 235, 24 October 2018)
- John Cooke - Board representative (OBM No. 235, 24 October 2018)
- Robert Matthews - Board Representative (OBM No. 235, 24 October 2018)
- Don Arnold - Manager Salinity and Irrigation

Agency representatives:

- Jenn Learmonth - DELWP, Manager Basin Salinity Management 2030
- Philip Endley - Lower Murray Water, Managing Director (to April 2019)
- David Girdwood - Lower Murray Water, Acting Managing Director (from April 2019)
- Andrew Kremor - Lower Murray Water, Staff member

Community members:

- Peter Jones - Community Member
- Owen Lloyd - Community Member

Executive Officer:

- Karuppan Sakadevan - Mallee CMA, Salinity and Irrigation Project Officer

Observers:

- Maggie Xipolitis, DELWP, Senior Policy Officer (to April 2019)
- Melissa Tylee, DELWP, Senior Policy Officer (from April 2019)

The Salinity Accountability Advisory Committee met four times during the reporting period.

Land and Water Advisory Committee

In accordance with the Mallee CMA Land and Water Advisory Committee (LWAC) Terms of Reference, the core function of the LWAC is to:

- Provide general advice to the Board on the development and delivery of projects and programs from a community perspective; and
- Advise management and the Board on process and appropriate levels of community ownership, consultation and engagement.

The LWAC may also be requested by the Board to provide feedback on issues identified as necessitating a community perspective.

The LWAC met four times during the 2018-19 reporting period.

The appointed Board representatives on the LWAC for the reporting period were:

- Kellie Nulty; and
- Robert Matthews.

Table 37 | LWAC membership and terms 2018-19.

Member	Appointed	Appointment review
Robert Biggs (Chair)	24 April 2018	30 June 2022
Keith Barber	23 March 2016	20 April 2020
Maria Riedl	23 March 2016	20 April 2020
Andrew Menzies	23 March 2016	20 April 2020
Andrew Hudson	24 April 2018	30 June 2022
Owen Lloyd	24 April 2018	30 June 2022
Graham McKechnie	24 April 2018	30 June 2022
Brian Ebery	24 April 2018	30 June 2022
Monica Munro	24 April 2018	30 June 2022
Eddie Lee	23 March 2016	Resigned 14 February 2019

Aboriginal Reference Group

In accordance with the Mallee CMA Aboriginal Reference Group Terms of Reference, the core function of the ARG is to provide advice and guidance to the Mallee CMA on:

- How to engage Aboriginal stakeholders in relevant NRM project planning;
- Aboriginal stakeholder needs and environmental values, including how these may be addressed through the organisation's work; and
- Emerging Aboriginal stakeholder issues and perspectives relevant to NRM.

The ARG may also be requested by the Board to provide feedback on issues identified as necessitating a community perspective.

The ARG met four times during the 2018-19 reporting period. At least one Board member attends ARG meetings.

The appointed Board representatives on the ARG for the reporting period were:

- Sharyon Peart; or
- Jacquelyn Turfrey (proxy).

Table 38 | ARG membership and terms 2018-19.

Member	Appointed	Appointment review
Charlene Davis (Chair)	24 April 2018	30 June 2020
Barengi Gadjin Land Council representative - Stuart Harradine ⁽¹⁾	26 April 2017	30 June 2023
Barengi Gadjin Land Council representative - Robbie Fry ⁽¹⁾	24 April 2018	30 June 2023
Veronica Harradine ⁽¹⁾	24 April 2018	30 June 2023
Andrew Kirby	24 April 2018	30 June 2020
Kathy Potter	24 April 2018	30 June 2020
Marie Murray	24 April 2018	30 June 2020
Rose Kirby	27 June 2018	30 June 2020
Margaret Hannah ⁽²⁾	26 June 2019	30 June 2023
Tayla Muir ⁽²⁾	26 June 2019	30 June 2023
Leigh Fuller	26 April 2017	25 April 2019 - expired
Norman Wilson ⁽³⁾	26 April 2017	30 June 2023
Robby Knight	24 April 2018	Resigned 13 March 2019

⁽¹⁾ re-appointed OBM 242 held 26 June 2019

⁽²⁾ new appointment OBM 242 held 26 June 2019

⁽³⁾ First People of the Millewa-Mallee Aboriginal Corporation representative from December 2018



Mallee CMA Chairs of the Board and ARG launch the Mallee CMA Reconciliation Action Plan.

Part 3

Workforce Data



Employment and conduct principles

The Mallee CMA is committed to applying merit and equity principles when appointing staff. The selection processes ensure that applicants are assessed and evaluated fairly and equitably on the basis of core capabilities against the *Mallee CMA Workforce Capability Framework* without discrimination. Employees have been correctly classified in workforce data collections.

Public Sector Values and Employment Principles

The Mallee CMA adheres to the *Public Administration Act 2004* established for the Victorian Public Sector Commission (VPSC). The VPSC's role is to strengthen public sector efficiency, effectiveness and capability, and advocate for public sector professionalism and integrity.

To ensure the values of this legislation are embedded within the Mallee CMA's workplace, the Mallee CMA has introduced policies and practices that are consistent with the VPSC's employment standards and provide for fair treatment, career opportunities and the early resolution of workplace issues including recruitment, redeployment, managing under performance and discipline. The Mallee CMA has advised its employees on how to avoid conflicts of interest, how to respond to offers of gifts and how it deals with misconduct.

Occupational Health, Safety and Wellbeing

The Mallee Catchment Management Authority (CMA) is committed to the effective management of occupational health, safety and wellbeing, which ranks equally with all other operational considerations.

It is the aim of Mallee CMA to minimise the risk of injury and disease to our employees and other persons by adopting a planned and systematic approach to the management of occupational health and safety and promote the mental health and wellbeing of all staff within the organisation, ensuring the resources for its successful implementation and continuous improvement are provided.

An independent review of the Mallee CMA OHS management system was conducted in late 2016. The results of the review continue to guide Occupational Health, Safety and Welfare (OHS&W) system improvements in 2018-19. The development of an OHS Strategy and Plan for the implementation of system improvements was paramount to addressing key focus areas identified within the review. During the past year, the Mallee CMA:

- Has implemented and reviewed the OHS Management Plan prioritising actions aimed at improving safe systems of work and safety performance;
- Implemented our training needs-analysis to identify specific safety training requirements of employees;
- Identified information technology solutions for:
 - conducting online training;
 - recording training competence; and
 - streamlining safety reporting and data analysis.
- Continued harmonisation of safety systems through participation in the Victorian CMA OHS Forum.

In previous years a near miss was reported separate to incidents. This is now combined as shown in Figure 13.

Mallee CMA remains focussed on the importance of incident reporting of all categories of hazards and supports our commitment to retaining ISO 9001:2015 certification for our Quality Management System.

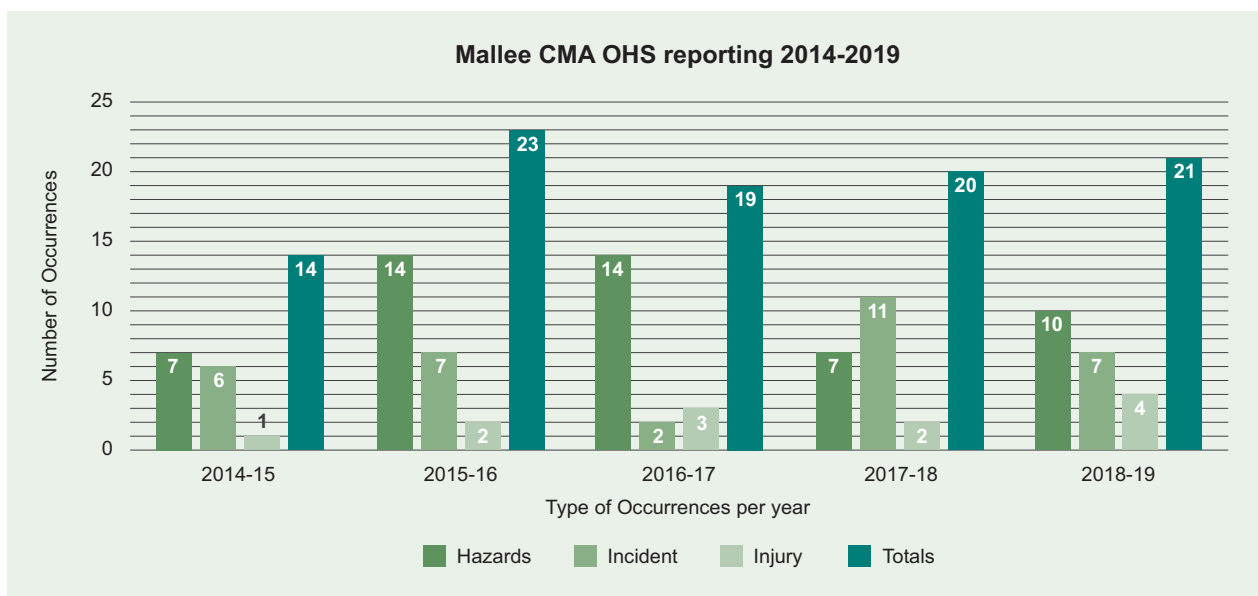


Figure 13 | Mallee CMA OHS reported occurrences 2014-15 to 2018-19.

Incident Management

Safety related occurrences across the Mallee CMA increased by 5% in 2018-19. Occurrences include 'near-misses', workplace hazards, incident/accidents and incidents resulting in reported injuries. In real terms, the increase equates to only 1 additional reported occurrence compared with the previous year. The number of incidents resulting in injury increased by 2 resulting in a 50% increase.

There were no notifiable incidents reported by the Mallee CMA to WorkSafe during the reporting period. Notifiable incidents are those which require reporting to WorkSafe in accordance with s37 of the *Occupational Health Safety Act 2004* (OHS Act).

The Mallee CMA had no claims for the 2018-19 reporting period. Given the overall low number of claims over the reporting period there was no trend identified in types of instances reported.



Mallee CMA staff receiving recognition of service.

Table 39 | Performance against OHS management measures.

Measures	Key Performance Indicators	2018-19	2017-18	2016-17
Incidents	Number of incidents (rate per 100 FTE)	41	40	39
Claims	Number of claims (rate per 100 FTE)	0	4	4
	Number of lost time claims (rate per 100 FTE)	0	2	2
	Number of claims exceeding 13 weeks (rate per 100 FTE)	Nil	Nil	Nil
Fatalities	Fatality claims	Nil	Nil	Nil
Claim costs	Average cost per standard claim	Nil	Nil	Nil
Return to work	Percentage of claims with return to work plans <30 days	Nil	Nil	Nil
Management commitment	Evidence of OH&S policy statement, OH&S objectives, regular reporting to senior management of OH&S, and OH&S plans (signed by CEO or equivalent)	Completed	Completed	Completed
	Evidence of OH&S 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
Risk management	Percentage of internal audits/inspections conducted as planned.	100%	100%	100%
	No. of Improvement Notices issued across the Department by WorkSafe Inspector	Nil	Nil	Nil
	Percentage of issues identified actioned arising from:			
	Internal audits	100%	100%	100%
	HSR provisional improvement notices (PINs)	Nil	Nil	Nil
	Worksafe Notices	Nil	Nil	Nil
	Percentage of managers and staff that have received OH&S training:			
	Induction	100%	100%	100%
	Management training	100%	100%	100%
	Contractors, temps, and visitors	100%	100%	100%
	Percentage of HSRs trained:			
	Acceptance of role	100%	100%	100%
	Re-training or refresher training	100%	100%	100%
	Reporting of incidents and injuries	100%	100%	100%

Comparative Workforce Data

The following table discloses the headcount and full-time staff equivalent (FTE) of all active public service employees of the Mallee CMA, employed in the last full pay period in June of the current reporting period (2019), and in the last full pay period in June of the previous reporting period (2018).

Employees have been correctly classified in workforce data collections.

Table 40 | Details of employment levels in June 2018 and 2019 ⁽ⁱ⁾.

	June 2019						June 2018					
	All Employees		Ongoing ⁽ⁱⁱ⁾		Fixed term & Casual		All Employees		Ongoing ⁽ⁱⁱ⁾		Fixed term & Casual	
	Head count	FTE	Head count	FTE	Head count	FTE	Head count	FTE	Head count	FTE	Head count	FTE
Gender												
Male	25	24.15	17	17	8	7.15	25	23.1	18	17.8	7	5.3
Female	30	27.24	16	15.2	14	12.04	31	26.45	21	19.2	10	7.25
Self-described	n	n	n	n	n	n	n	n	n	n	n	n
Age												
15-24	1	1			1							
25-34	14	13.59	6	6	8	7.59	10	10	6	6	4	4
35-44	12	11.2	12	11.2			19	15.4	14	12.6	5	2.8
45-54	14	12.65	8	8	6	4.65	16	14.35	10	10	6	4.35
55-64	13	12.20	7	7	6	5.2	9	8.8	8	7.8	1	1
65+	1	0.75			1	0.75	2	1	1	0.6	1	0.4
Classification												
CEO	1	1			1	1	1	1	1	1		
General Managers	3	3	2	2	1	1	3	3	3	3		
Managers	9	8.4	9	8.4			7	6.4	7	6.4		
Project/ Support Staff	42	38.99	22	21.8	20	17.19	45	39.15	28	26.6	17	12.55
Total	55	51.39	33	32.2	22	19.19	56	49.55	39	37	17	12.55

'n' denotes that no data has been collected

⁽ⁱ⁾ Excluded are external contractors/consultants, and temporary staff employed by employment agencies.

⁽ⁱⁱ⁾ Ongoing employees include people (full time and part time) engaged on an open ended contract of employment and executives engaged on a standard executive contract who were active in the last full pay period of June.

Diversity and Inclusion Policy

At the Mallee CMA our vision is to develop a diverse workforce and a culture of inclusion in all areas of our business by valuing social and professional identity, alternative thoughts, backgrounds, experiences, uniqueness and creativity. We will do this as a reflection of community diversity. Building a diverse and inclusive workforce is how we can demonstrate the highest value for our people, our stakeholders and our community. We need people who think and approach problems differently, who are willing to challenge the status quo, and who come from different backgrounds.

The Mallee CMA's Diversity and Inclusion Plan 2017-22 was accepted by the Minister for Water in 2017. A target of the Plan is to ensure diversity and inclusion training is provided in all employee and board member e-learning inductions within 12 months. The following table outlines the Mallee CMA's actual progress against this target in 2017-18 and 2018-19.

Table 41 | Progress against Diversity and Inclusion policy initiative.

Diversity and Inclusion policy initiative	Target	Actual progress in 2017-18	Actual progress in 2018-19
1.1 Provide regular training and support to all Board members and staff to promote a strong understanding of, and support for, diversity and inclusion in the workplace	100% completion of diversity e-learning training within 12 months	100%	100%

Executive Officer Data

An executive officer (EO) is defined as an executive under Part 3 of the *Public Administration Act 2004* (Vic) or a person to whom the Victorian Government's Policy on Executive Remuneration in Public entities applies.

The Mallee CMA does not have any executive officers that meet the definition of Financial Reporting Directions (FRDs) 15E and 21C disclosures of responsible persons and executive officers, other than ministers and the accountable officer, during the reporting period.

The accountable officer's remuneration has been disclosed in financial statements note 8.5 Related Parties.

During the reporting period the Mallee CMA had one employee on an Office of Public Sector Executive Remuneration (OPSER) contract who is female.

Part 4

Other Disclosures

Expenditure of funds within the Mallee Salinity Investment Plan 2018-19

The *Ministerial Policies for Managing Water-use Licences in Salinity Impact Zones (2007)* requires a one off capital payment and an ongoing operation and maintenance payment for each megalitre of new or increased Annual Use Limit (AUL), unless it is AUL transferred from a High Impact Zone. This payment is collected to contribute towards the cost of works or measures to offset salinity impacts in the Murray River.

All charges associated with new or increased AUL are collected by water authorities and forwarded annually to the Mallee CMA. Funds forwarded to the Mallee CMA in 2018-19 totalled \$3,075,856.

Total expenditure in 2018-19 within the Mallee Salinity Investment Plan was \$2,561,629. Projects delivered included:

- Implementation of a governance framework to deliver regional monitoring and reporting obligations under the *Water Act 2007* (Cth) and *Catchment and Land Protection Act 1994* (Vic);
- The Mallee On-farm Irrigation Incentives Program, which focused on assisting irrigators in the upgrade and management of on-farm infrastructure to generate water use efficiency outcomes resulting in salinity benefits. This investment has the potential to provide additional offset salinity credit claims associated with relevant accountable actions (\$309,694);
- The review and refinement of the model used to estimate salinity impacts of private diversion irrigation in the Victorian Mallee. The new model will replace the 2001 model and includes a greater level of sophistication. When accredited by the Murray Darling Basin Authority the model will improve and gives greater confidence to the estimation of salinity impact in the Murray River associated with irrigation development (\$154,532);
- Investment in Regional Capacity Development facilitated implementation of a communications strategy addressing community understanding and input into the salinity management framework. Over the reporting

period the campaign titled 'The salt beneath our feet' was continued at a series of public and online forums engaging community on salinity related topics (\$218,104);

- Annual data collection from Mallee groundwater observation bores (\$144,713) and irrigation drainage monitoring stations (\$266,851), which helped to support and refine salinity impact assessments that generated salinity credits and debits for the region. This project involved collection and management of groundwater level and salinity data at 406 monitoring bores visited on an annual, quarterly or biennial basis, along with the collection and management of salinity and flow data from 19 irrigation drainage outfall sites and three river sites. The data informs salinity impact models and reviews of specific accountable actions within the region. Additional to monitoring, all 22 drainage and surface water monitoring sites were assessed for maintenance, which has resulted in an upgrade program developed for implementation in 2019/20;
- Stage one of a four stage groundwater bore maintenance and reconditioning program, which was informed by a bore network condition investigation conducted in 2015-16 and 2019. The network includes bores dating back to the 1970s and many had obstructions, blockages, stale water and accumulated sediments. Newer bores were missing critical construction data such as vertical elevations which are required to enable more accurate calculation of depth to groundwater. Maintenance and reconditioning of the network is essential as it provides data to the BSM2030 Register A & B items, catchment condition assessments and accountable action reviews (\$585,472);
- A program of study to validate crop water requirement and root zone drainage results obtained during 2015-2018 using satellite-based techniques. The results from the study will play a critical role in providing input data to modelling work for estimating the salinity impact of new irrigation developments, with improved confidence and accuracy at regional scale (\$174,176);
- A program of work to progress achievement of Action 4.8 of the Victorian Government's Water for Victoria water plan. This action aims to improve salinity management in the Mallee and commits to investing revenue from salinity offset charges to update

contemporary knowledge of salinity impacts, review salinity offset charges, and update policies under the Victorian Mallee salinity management framework. On 1 July 2018 the Nyah to South Australian (SA) Border 50c levy concluded, while work continued on the review of salinity offset charges. An independent assessment demonstrated that the Victorian Mallee Irrigation Development Guidelines are of world's best practice. As part of the program, a short history of Victorian Mallee irrigation development was prepared, the Victorian Mallee Irrigation Incentives Program was reviewed and a survey was undertaken of Merbein furrow irrigators to understand impediments to modernisation (\$191,284).

- A program of field investigations to better understand and quantify the physical processes affecting the dynamics of water movement between crop rooting depth and regional groundwater under irrigated tree crops. The project results help to explain why the magnitude of root zone drainage (deep drainage) is quite different from the recharge to groundwater. When extended spatially and temporally it will reduce the uncertainty associated with recharge to groundwater used in modelling and help explain discharge to the river and salinity impact estimates (\$90,193)

The balance of funds as at 30 June 2019 is \$31,576,020. These funds are segregated for operational and capital expenditure for the purpose of offsetting the salinity impact of new irrigation development in the Victorian Mallee and to maintain the region's compliance with State and Federal requirements as they relate to salinity impact and mitigation.

Local Jobs First - Victorian Industry Participation Policy

The Mallee CMA has no contracts commenced and/or completed to which the Local Jobs First - VIPP applied in the reporting period.

Government advertising expenditure

Mallee CMA expenditure in the 2018-19 reporting period on government campaign expenditure was nil.

Consultancy expenditure

Details of consultancies (valued at \$10,000 or greater)

In 2018-19, there were 80 consultancies where the total fees payable to the consultants was \$10,000 or greater. The total expenditure incurred during 2018-19 in relation to these consultancies was \$3,395,302 (excl. GST).

Details of individual consultancies are outlined on the Mallee CMA's website, at www.malleecma.vic.gov.au in the Resources tab.

Details of consultancies (valued at less than \$10,000)

In 2018-19, there were 20 consultancies engaged during the year, where the total fees payable to the consultants were less than \$10,000. The total expenditure incurred during 2018-19 in relation to these consultancies was \$63,881 (excl. GST).

The following definitions are applied in calculating the aforementioned amounts:

- Contractor - A contractor is an individual or organisation that is formally engaged to provide works or services for or on behalf of an entity.
- Consultant - A consultant is a particular type of contractor that is engaged primarily to perform a discrete task for an entity that facilitates decision making through: provision of expert analysis and advice; and/or development of a written report or other intellectual output.

Information and Communication Technology (ICT) expenditure

The Mallee CMA had a total ICT expenditure of \$782,453.24, with the details shown below for the reporting period.

ICT expenditure refers to the Mallee CMA's costs in providing business enabling ICT services within the current reporting period. It comprises Business as Usual (BAU) ICT expenditure and Non-Business as Usual (Non-BAU) ICT expenditure. Non-BAU ICT expenditure relates to extending or enhancing the Mallee CMA's

Table 42 | ICT expenditure 2018-19.

All operational ICT expenditure	ICT expenditure relating to projects to create or enhance ICT capabilities		
Business As Usual (BAU) ICT expenditure	Non-Business As Usual (Non-BAU) ICT expenditure	Operational expenditure (OPEX)	Capital expenditure (CAPEX)
Total	Total (A + B)	A	B
\$662,705.85	\$119,747.39	\$66,737.19	\$53,010.20

current ICT capabilities. BAU ICT expenditure is all remaining ICT expenditure which primarily relates to ongoing activities to operate and maintain the current ICT capability.

Disclosure of major contracts

The Mallee CMA did not award any major contracts (valued at \$10 million or more) during 2018-19 reporting period.

Freedom of information

The *Freedom of Information Act 1982* (Cth) (the Act) allows the public a right of access to documents held by the Mallee CMA. 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.

An applicant has a right to apply for access to documents held by the Mallee CMA. This comprises documents both created by the Mallee CMA or supplied to the Mallee CMA by an external organisation or individual, and may also include maps, films, photographs, computer printouts, computer discs, tape recordings and videotapes. Information about the type of material produced by the Mallee CMA is available on the Mallee CMA's website under its Part II Information Statement.

The Act allows Mallee CMA 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 Mallee CMA in confidence.

From 1 September 2017, the Act has been amended to reduce the Freedom of Information (Fol) processing time for requests received from 45 to 30 days. In some cases, this time may be extended.

If an applicant is not satisfied by a decision made by the Mallee CMA, 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.

Making a request

Fol requests can be lodged online at www.foi.vic.gov.au. An application fee of **\$29.60** applies. Access charges may also be payable if the document pool is large, and the search for material, time consuming.

Access to documents can also be obtained through a written request to the Mallee CMA's Freedom of Information team, as detailed in s17 of the *Freedom of Information Act 1982*.

When making a Fol request, applicants should ensure requests are in writing, and clearly identify what types of material/documents are being sought.

Requests for documents in the possession of the Mallee CMA should be addressed to:

Freedom of Information Team
Mallee Catchment Management Authority
Mail: PO Box 5017, Mildura, Victoria 3502
Email: foi@malleecma.com.au

Fol statistics

No Freedom of Information (Fol) requests were received during the reporting period.

Further information

Further information regarding the operation and scope of Fol can be obtained from the Act; regulations made under the Act; and www.foi.vic.gov.au.

Building Act 1993

The Mallee 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 *Building Act 1993*.

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.

Mallee CMA continues to comply with the requirements of the Competitive Neutrality Policy.

Protected Disclosure Act 2012

The *Protected Disclosure Act 2012* (PD Act) enables people to make a disclosure about corrupt or improper conduct by a public officer or a public body.

Mallee CMA is a public body for the purposes of the PD Act.

What is a protected disclosure?

A protected disclosure is a complaint of corrupt or improper conduct 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.

How do I make a Protected Disclosure?

You can make a protected disclosure about Mallee CMA or its Board members, officers or employees by contacting IBAC (details below).

Mallee CMA has established procedures for the protection of persons from detrimental action in reprisal for making a protected disclosure about Mallee CMA, its Board members, officers or employees. You can access Mallee CMA's procedures on its website at www.malleecma.vic.gov.au

Please note that the Mallee CMA is not able to receive protected disclosures.

Independent Broad based Anti-Corruption Commission (IBAC) Victoria

Address: Level 1, North Tower, 459 Collins Street, Melbourne, VIC 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.

Catchment and Land Protection Act 1994

The Mallee CMA was established in 1997 under the *Catchment and Land Protection Act 1994* (Vic) (CaLP Act) and has responsibilities under the *Water Act 1989* (Vic), Statement of Obligations and the CaLP Act, Statement of Obligations.

CaLP Act responsibilities are set out on pages 7 of this Annual Report. The Mallee CMA is compliant with these establishing act requirements.

The Statement of Obligations for both the CaLP Act and *Water Act* were re-issued in January 2018 and were applied to the *Mallee CMA's 2018-23 Corporate Plan* and reported against in this and subsequent Annual Reports.

Office-based environmental impacts

The Mallee Catchment Management Authority (CMA) strives to implement and improve sustainable practices in its operations in both the office and field environment. The Mallee CMA has modified its business activities in accordance with the Environmental Sustainability Policy. The policy identifies environmental impacts and measures for the reduction in usage of resources and waste production. As a member of the Victorian Government - Irymple site user group, the Mallee CMA has made a commitment to modifying its practices to facilitate a site-wide reduction in environmental impacts via an improvement in sustainability.

As a tenant of the Victorian Government site at Irymple, utility resource usage is monitored and controlled by the Department of Jobs, Precincts and Regions (DJPR) as the landlord. All steps taken to reduce environmental impact implemented by the Mallee CMA contribute to the whole of site energy efficiencies and contribute toward the reduction in (DJPR) energy resource usage.

Further information on office-based environmental impacts is presented in the following table.

Table 43 | Disclosures under the *Protected Disclosures Act 2012*.

Disclosures under the <i>Protected Disclosure Act 2012</i>	2018-19	2017-18
The number of disclosures made by an individual to the Mallee CMA and notified to the Independent Broad-based Anti-corruption Commission.	0	0

Table 44 | Mallee CMA office-based environmental impacts.

Outputs	Activity	2018 Actual	Comment
Energy use	Total energy usage segmented by primary source, including Green Power (mega joules)	*	Entries marked with an asterisk (*) contribute to the whole of Victorian Government Site - Irymple managed by the landlord, DJPR.
	Greenhouse gas emissions associated with energy use, segmented by primary source and offsets (tonnes CO ₂ -e)	*	
	Percentage of electricity purchased as Green Power (%)	*	
	Units of energy used per full time employee (mega joules) per FTE)	*	
	Units of energy used per unit of office area (mega joules per m ²)	*	
Waste and recycling	Total units of office waste disposed of by destination (kilograms per year)	*	Entries marked with an asterisk (*) contribute to the whole of Victorian Government Site - Irymple managed by the landlord, DJPR.
	Total units of office waste disposed of per FTE by destination (kilograms per FTE)	*	
	Recycling rate (% of total waste by weight)	*	
	Waste disposal - separation of office waste into 'classes' e.g. paper, recyclable plastics, rubbish	*	Entries marked with an asterisk (*) contribute to the whole of Victorian Government Site - Irymple managed by the landlord, DJPR.
	Reduction and recycling of cartridges and consumables containers	100%	Cartridge recycled through suppliers. Containers recycled through site
	Re-use and/or recycling of mobile phones and unserviceable equipment	100%	Mobile phones are recycled when replaced with new handsets. Surplus or obsolete equipment sent to Waste Management Centre - Mildura Rural City Council 'Around Again' re-use facility
Paper use	Total units of A4 equivalent copy paper used (reams)	590	
	Units of A4 equivalent copy paper used per FTE (reams per FTE)	11.5	Double-sided printing and printer user boxes are set as default to reduce paper usage
	Percentage of recycled content in copy paper purchased (%).	100%	
Water consumption	Total units of metered water consumed by water source (kilolitres)	*	Entries marked with an asterisk (*) contribute to the whole of Victorian Government Site - Irymple managed by the landlord, DJPR.
	Units of metered water consumed in offices per FTE (kilolitres per FTE)	*	
	Units of metered water used in offices per unit of office area (kilolitres per m ²)	*	
Transport	Total energy consumption by vehicle fleet segmented by vehicle/ fuel type (mega joules)	985,261 MJ 206,600 MJ	Diesel – 25,731.28 L Unleaded - 6,160.99 L
	Total vehicle travel associated with Entity operations segmented by vehicle/ fuel type (kilometres);	262,334 km 61,474 km	Vehicles fuelled with Diesel Vehicles fuelled with Unleaded
	Total Greenhouse gas emissions from vehicle fleet	91.33	(tonnes CO ₂ -e)
	Total distance travelled by air (kilometres)	148,342 km	

Continued...

Table 44 | Mallee CMA office-based environmental impacts. *Continued...*

Outputs	Activity	2018 Actual	Comment
Greenhouse gas emissions	Total greenhouse gas emissions associated with vehicle fleet	92.2	(tonnes CO ₂ -e)
	Total greenhouse gas emissions associated with air travel	23.222	(tonnes CO ₂ -e)
	Total greenhouse gas emissions associated with energy use (tonnes CO ₂ -e)	*	Entries marked with an asterisk (*) contribute to the whole of Victorian Government Site - Irymple managed by the landlord, DJPR.
	Total greenhouse gas emissions associated with waste disposal (tonnes CO ₂ -e)	*	Entries marked with an asterisk (*) contribute to the whole of Victorian Government Site - Irymple managed by the landlord, DJPR.
	Greenhouse gas emissions offsets purchased	Nil	(tonnes CO ₂ -e)
Procurement	<p>The Mallee CMA Purchasing and Procurement Policy includes environmental procurement as an essential consideration.</p> <p>Employees are required to purchase goods and services that have reduced impacts on the environment.</p> <p>Employees are also required to consider environmental impacts and opportunities during the procurement process. Employees undertaking procurement should consider where appropriate the inclusion of minimum environmental requirements in specifications.</p> <p>Environmental requirements can be defined in relation to performance standards, the impact of the good or service on the environment and/or in relation to supplier's environmental management practices.</p> <p>The Mallee CMA policy also requires employees to undertake socially responsible procurement which includes the protection of the environment and the conservation of resources.</p>	100%	Participation by % of FTE

Additional information available on request

In compliance with the requirements of the Standing Directions of the Minister for Finance, details in respect of the items listed below have been retained by the Mallee CMA and are available (in full) on request, subject to the provisions of the *Freedom of Information Act 1982*:

- a statement that declarations of pecuniary interests have been duly completed by all relevant officers;
- details of publications produced by the agency about itself, and how these can be obtained;
- details of any major external reviews carried out on the agency;
- details of major promotional, public relations and marketing activities undertaken by the agency to develop community awareness of the entity and its services;
- details of assessments and measures undertaken to improve the occupational health and safety of employees;
- a general statement on industrial relations within the agency, and details of time lost through industrial accidents and disputes; and
- details of all consultancies and contractors, including consultants/contractors engaged, services provided, and expenditure committed for each engagement.

The information is available on request to:
Freedom of Information Team
Mallee Catchment Management Authority
Mail: Mallee CMA, PO Box 5017, Mildura, Victoria 3502
Phone: 03 5051 4377
Email: foi@malleecma.com.au

Additional information included in the annual report

Details in respect of the following items have been included on the pages indicated below:

- a list of the Mallee CMA's major committees, the purposes of each committee, and the extent to which the purposes have been achieved – page 83;

- details of changes in FoI fees charged by the Mallee CMA – page 93;
- assessments and measures undertaken to improve the occupational health and safety of employees - page 86.

Information that is not applicable to the Mallee CMA

The following information is not relevant to the Mallee CMA for the reasons set out below:

- details of shares held by senior officers; no shares have ever been issued in the Mallee CMA; and
- details of overseas visits undertaken; no Board members or senior executives took overseas work related trips in 2018-19.

Compliance with DataVic Access Policy

Consistent with the Victorian Government's DataVic Access Policy (2012), the Mallee CMA made one data set available on the DataVic website in 2018-19.

Information included in this Annual Report will also be made available at <http://www.data.vic.gov.au/> in the following electronic readable formats: XLS.

Since the policy was introduced, the Mallee CMA has made available to the public all data tables from Annual Reports since 2014-15.

Attestation for financial management compliance with Ministerial Standing Direction

Mallee Catchment Management Authority Financial Management Compliance Attestation Statement

I, Sharyon Peart, on behalf of the Responsible Body, certify that the Mallee Catchment Management Authority has complied with the applicable Standing Directions of the Minister for Finance under the *Financial Management Act 1994* and Instructions.



Sharyon Peart
Board Chair
Mallee Catchment Management Authority

28 August 2019

Part 5

Financial Statements

Declaration in Financial Statements

The attached financial statements for the Mallee Catchment Management Authority have been prepared in accordance with Direction 5.2 of the Standing Directions of the Minister for Finance 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 2019 and financial position of the Authority at 30 June 2019.

At the time of signing, we are not aware of any circumstances which would render any particulars included in the financial statements to be misleading or inaccurate.

We authorise the attached financial statements for issue on 28 August 2019.



Sharyn Peart
Chairperson
Mallee Catchment Management Authority



Jenny Collins
CEO and Accountable Officer
Mallee Catchment Management Authority



Meagan Crozier CPA
Chief Finance Officer
Mallee Catchment Management Authority

28 August 2019

Independent Auditor's Report

To the Board of the Mallee Catchment Management Authority

Opinion	<p>I have audited the financial report of the Mallee Catchment Management Authority (the authority) which comprises the:</p> <ul style="list-style-type: none"> • balance sheet as at 30 June 2019 • 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 • declaration in the financial statements. <p>In my opinion, the financial report presents fairly, in all material respects, the financial position of the authority as at 30 June 2019 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
30 August 2019



Paul Martin
as delegate for the Auditor-General of Victoria

Comprehensive Operating Statement
For the financial year ended 30 June 2019

			\$
	Notes	2019	2018
Income from transactions			
Government contributions	2.2.1	11,830,307	12,970,809
Interest	2.2.2	775,255	674,294
Other income	2.2.3	3,186,339	3,380,768
Total income from transactions		15,791,901	17,025,872
Expenses from transactions			
Employee expenses	3.1.1	4,957,176	4,999,697
Grants and incentives	3.2	1,365,477	1,518,801
Depreciation	4.1.1	202,929	238,744
Amortisation	4.2	199,160	199,160
Other operating expenses	3.3	10,068,547	8,866,938
Total expenses from transactions		16,793,290	15,823,339
Net result from transactions (net operating balance)		(1,001,389)	1,202,532
Other economic flows included in net result			
Net gain/(loss) on disposal of non-financial assets	8.1	18,868	27,530
Total other economic flows – included in net result		18,868	27,530
Comprehensive result		(982,521)	1,230,063

The accompanying notes form part of these financial statements

Balance Sheet

As at 30 June 2019

	Notes	2019	2018
Assets			
Financial assets			
Cash and deposits	6.1	39,084,717	5,150,919
Receivables	5.1	2,435,158	839,843
Investments and other financial assets	4.3	-	36,000,000
Total financial assets		41,519,876	41,990,762
Non-financial assets			
Prepayments	5.3	24,533	-
Plant and equipment	4.1	695,902	712,019
Intangible assets	4.2	42,273	241,433
Total non-financial assets		762,707	953,452
Total assets		42,282,583	42,944,214
Liabilities			
Payables	5.2	810,807	499,580
Employee related provisions	3.1.2	875,889	866,226
Total liabilities		1,686,696	1,365,806
Net assets		40,595,887	41,578,408
Equity			
Accumulated surplus/(deficit)		684,502	607,625
Reserves	8.2	35,814,050	36,873,448
Contributed capital		4,097,335	4,097,335
Net worth		40,595,887	41,578,408

The accompanying notes form part of these financial statements

Cash Flow Statement

For the financial year ended 30 June 2019

	Notes	2019	2018
Cash flows from operating activities			
Receipts			
Receipts from government		10,672,804	12,454,570
Interest received		775,255	679,218
Goods and services tax received from the ATO (a)		662,671	902,390
Other receipts		3,186,339	3,375,768
Total receipts		15,297,069	17,411,946
Payments			
Payments to suppliers and employees		(17,195,326)	(16,855,283)
Total payments		(17,195,326)	(16,855,283)
Net cashflows from/(used in) operating activities	6.1.1	(1,898,258)	556,663
Cash flows from investing activities			
Payments for investments		(2,037,657)	(35,000,000)
Proceeds from sale of investments		38,037,657	-
Purchases of non-financial assets		(309,006)	(311,239)
Proceeds from sale of non-financial assets		141,063	99,322
Net cashflows from/(used in) investing activities		35,832,056	(35,211,917)
Net increase/(decrease) in cash and cash equivalents		33,933,799	(34,655,254)
Cash and cash equivalents at the beginning of the financial year		5,150,919	39,806,173
Cash and cash equivalents at the end of the financial year	6.1	39,084,717	5,150,919

Note:

(a) GST received from the Australian Taxation Office is presented on a net basis

The accompanying notes form part of these financial statements

Statement of Changes in Equity
For the financial year ended 30 June 2019

\$

	Notes	Reserves	Accumulated surplus / (deficit)	Contributed capital	Total
Balance at 1 July 2017		35,683,313	567,694	4,097,335	40,348,342
Net result for the year		-	1,230,063	-	1,230,063
Transfers to/(from) reserves		1,190,135	(1,190,132)	-	3
Balance at 30 June 2018		36,873,448	607,625	4,097,335	41,578,408
Net result for the year		-	(982,521)	-	(982,521)
Transfers to/(from) reserves	8.2	(1,059,398)	1,059,398	-	-
Balance at 30 June 2019		35,814,050	684,502	4,097,335	40,595,887

The accompanying notes form part of these financial statements

1. ABOUT THIS REPORT

The Mallee Catchment Management Authority (the Authority) is a government authority of the State of Victoria, established by the *Catchment and Land Protection Act 1994*.

A 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.

It's principal address is:

Agriculture Victoria
315-341 Koorlong Avenue
Irymple, Victoria, 3498

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, income and expenses are recognised in the reporting period to which they relate, regardless of when cash is received or paid.

All accounting policies are consistent with prior except for AASB 9 Financial Instruments refer note 7.1

Consistent with the requirements of AASB 1004 *Contributions*, contributions by owners (that is, contributed capital and its repayment) are treated as equity transactions and, therefore, do not form part of the income and expenses of the Authority.

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 applying AAS that have significant effects on the financial statements and estimates are disclosed in the notes under the heading: 'Significant judgement or estimates'.

Compliance information

These general purpose financial statements have been prepared in accordance with the FMA and applicable Australian Accounting Standards (AASs) which include Interpretations, issued by the Australian Accounting Standards Board (AASB).

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 Report for the year ended 30 June 2019

2. FUNDING DELIVERY OF OUR SERVICES

Introduction

The Authority's primary objective is to facilitate integrated and ecological sustainable management of the natural, cultural and productive landscapes occurring within the region. Programs and projects are developed to deliver against the region's priorities for these landscapes.

To enable the Authority to fulfil its objective and provide outputs it receives income (predominantly accrual based government contributions). The Authority also receives Salinity levies collected specifically to offset salinity impact of irrigation development.

Structure

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

2.1 Summary of income that funds the delivery of our services

	2019	2018
Government Contributions	11,830,307	12,970,809
Interest	775,255	674,294
Other Income	3,186,339	3,380,768
Total income that funds delivery of services	15,791,901	17,025,871

Income is recognised to the extent that it is probable the economic benefits will flow to the Authority and the income can be reliably measured. Where applicable, amounts disclosed as income are net of returns, allowances, duties and taxes.

2.2 Income from transactions

2.2.1 Government contributions

	2019	2018
State Government		
State Government Contributions	1,241,522	375,562
Integrated Water Management	68,000	-
Catchment Governance	843,200	935,205
Basin Plan	195,000	120,000
Threatened Species Protection Initiative	1,387,847	352,000
Sustainable Irrigation Program	317,000	1,073,000
Landcare Program	192,086	735,427
Environmental Partnership Program	-	(18,500)
Environmental Water Program	519,000	505,000
Environmental Water Holder	394,057	945,034
Water Management Program	1,587,000	1,624,000
Our Catchment Our Communities	436,000	646,000
Total State Government contributions	7,180,712	7,292,728
Commonwealth Government		
Commonwealth Contributions	52,459	31,208
The Living Murray	2,107,263	1,940,364
National Landcare Program	2,087,308	2,133,760
Sustainable Diversion Limits	402,565	1,572,749
Total Commonwealth Government contributions	4,649,595	5,678,081
Total Government contributions	11,830,307	12,970,809

**Notes to the Financial Report
for the year ended 30 June 2019**

2.2.2 Interest income

	\$	
	2019	2018
Interest from financial assets not at fair value through profit and loss		
Interest on bank deposits	775,255	674,294
Total interest from financial assets not at fair value through profit and loss	775,255	674,294

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

2.2.3 Other income

	\$	
	2019	2018
Salinity levies	3,101,249	3,313,178
Sundry income	85,090	67,590
Total other income	3,186,339	3,380,768

Salinity levies are collected under the Ministerial 'policies for managing water use licences in salinity impact zones (2007)', whereby each mega litre of new or increased Annual Use Limit (AUL) attracts a capital or ongoing charge to contribute to the costs of works and measures to offset salinity impacts. Salinity levies are recognised on an accrual basis.

**Notes to the Financial Report
for the year ended 30 June 2019**

3. THE COST OF DELIVERING OUR SERVICES

Introduction

This section provides an account of the expenses incurred by the Authority in delivering services and outputs. In Section 2, the funds that enable the provision of services were disclosed and in this note the cost associated with provision of services are recorded.

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.

Structure

- 3.1 Expenses incurred in delivery of services
- 3.2 Grant expenses
- 3.3 Other operating expenses

3.1 Expenses incurred in delivery of services

			\$
	Notes	2019	2018
Employee benefits expense	3.1.1	4,957,176	4,999,697
Grants and incentives	3.2	1,365,477	1,518,801
Other operating expenses	3.3	10,068,547	8,866,938
Total expenses incurred in delivery of services		16,391,201	15,385,436

3.1.1 Employee benefits in the comprehensive operating statement

			\$
	Notes	2019	2018
Salaries and wages, annual leave and long service leave		4,558,708	4,577,790
Termination benefits		2,356	33,998
Defined Contribution Superannuation	3.1.3	396,112	387,909
Total employee benefits expenses		4,957,176	4,999,697

Employee expenses are recognised on an accrual basis and include all costs related to employment including wages and salaries, fringe benefits tax, leave entitlements, termination payments, payroll tax and WorkCover premiums.

The amount recognised in the comprehensive operating statement in relation to superannuation is employer contributions for members of defined contribution superannuation plans that are paid or payable during the reporting period. The Authority does not contribute to any defined benefit superannuation plans.

Termination benefits are payable when employment is terminated before normal retirement date, or when an employee accepts an offer of benefits in exchange for the termination of employment. Termination benefits are recognised when the Authority is demonstrably committed to terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal or providing termination benefits as a result of an offer made to encourage voluntary redundancy.

**Notes to the Financial Report
for the year ended 30 June 2019**

3.1.2 Employee benefits in the balance sheet

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.

	\$	
	2019	2018
Current provisions:		
Annual leave		
Unconditional and expected to settle within 12 months	255,979	231,065
Unconditional and expected to settle after 12 months	25,684	72,427
Time in lieu and rostered days off		
Unconditional and expected to settle within 12 months	6,045	4,494
Long service leave		
Unconditional and expected to settle within 12 months	-	3,905
Unconditional and expected to settle after 12 months	401,438	377,246
Provisions for on-costs		
Unconditional and expected to settle within 12 months	28,393	28,753
Unconditional and expected to settle after 12 months	60,160	68,557
Total current provisions for employee benefits	777,699	786,447
Non-current provisions		
Employee benefits	85,985	68,890
On-costs	12,205	10,890
Total non-current provisions for employee benefits	98,190	79,780
Total provisions for employee benefits	875,889	866,227

	\$
	2019
Reconciliation of movement in on-cost provision	
Opening balance	108,199
Additional provisions recognised	(5,465)
Reductions due to transfers out	(1,976)
Closing balance	100,758
Current	88,553
Non-current	12,205

Wages and salaries, annual leave and sick leave: Liabilities for wages and salaries (including non-monetary benefits, annual leave and on-costs) are recognised as part of the employee benefit provision as current liabilities, because the Authority does not have an unconditional right to defer settlements of these liabilities.

The liability for salaries and wages are recognised in the balance sheet at remuneration rates which are current at the reporting date. As the Authority expects the liabilities to be wholly settled within 12 months of reporting date, they are measured at undiscounted amounts.

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.

Unconditional annual leave and LSL are disclosed as a current liability; even where the Authority does not expect to settle the liability within 12 months because it will not have the unconditional right to defer the settlement of the entitlement should an employee take leave within 12 months.

**Notes to the Financial Report
for the year ended 30 June 2019**

The components of this current LSL liability are measured at either undiscounted value, if the Authority expects to wholly settle within 12 months, or present value, if the Authority does not expect to wholly settle within 12 months.

Conditional LSL is disclosed as a non-current liability. There is an unconditional right to defer the settlement of the entitlement until the employee has completed the requisite years of service. This non-current LSL is measured at present value.

Any gain or loss following revaluation of the present value of non-current LSL liability is recognised as a transaction.

3.1.3 Superannuation contributions

Employees of the Authority are entitled to receive superannuation benefits. The Authority only contributes to defined contribution plans.

	Paid contributions for the year		Contributions outstanding at year end	
	2019	2018	2019	2018
Defined contribution plans				
VicSuper	172,502	207,754	20,685	25,712
Other Superannuation Funds	223,610	180,155	30,238	25,943
Total	396,112	387,909	50,923	51,654

3.2 Grant expenses

	2019	2018
Payments for specific purposes	1,365,477	1,518,801
Total grant expenses	1,365,477	1,518,801

Grant expenses are contributions of the Authority's resources to another party for specific purposes where there is no expectation that the amount will be repaid in equal value (either by money, goods or services).

Grants can be either operating or capital in nature. The Authority only makes special purpose grants which are paid for a particular purpose and/or have conditions attached regarding their use.

Grant expenses are recognised in the reporting period in which they are paid or payable. Grants only take the form of money.

3.3 Other operating expenses

	2019	2018
Supplies and services		
Purchase of services (including remuneration of auditors)	1,987,784	1,958,914
Consultancies - project based	2,282,098	3,789,244
Contractors - project based	5,489,476	2,809,935
Rent	309,190	308,845
Total other operating expenses	10,068,547	8,866,938

Other operating expenses generally represent the day-to-day running costs incurred in normal operations.

Supplies and services are recognised as an expense in the reporting period in which they are incurred.

Project based consultancy and contractor expenses relate to specific on ground projects undertaken by the Authority and do not include similar expenses of a corporate nature.

4. KEY ASSETS AVAILABLE TO SUPPORT OUTPUT DELIVERY

Introduction

The Authority controls non-financial physical assets and investments that are utilised in fulfilling its objectives and conducting its activities. They represent the resources that have been entrusted to the Authority to be utilised for delivery of those outputs.

Fair value measurement: Where the assets included in this section are carried at fair value, additional information is disclosed in Note 7.3 in connection with how those fair values were determined.

Structure

- 4.1 Total plant and equipment
- 4.2 Intangible assets
- 4.3 Investments and other financial assets

4.1 Total plant and equipment

	Gross carrying amount		Accumulated depreciation		Net carrying amount	
	2019	2018	2019	2018	2019	2018
Motor vehicles at fair value	735,320	774,786	(208,608)	(224,100)	526,712	550,687
Office furniture and equipment at fair value	68,964	82,683	(34,554)	(56,405)	34,410	26,277
Plant and equipment at fair value	243,045	319,536	(108,265)	(184,481)	134,780	135,055
Net carrying amount	1,047,329	1,177,005	(351,427)	(464,987)	695,902	712,019

Initial recognition: Items of office furniture and equipment and 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.

The cost of a leasehold improvements is capitalised and depreciated over the shorter of the remaining term of the lease or their estimated useful lives.

Subsequent measurement: Plant and equipment are subsequently measured at fair value less accumulated depreciation and impairment. Fair value is determined with regard to the asset's highest and best use (considering legal or physical restrictions imposed on the asset, public announcements or commitments made in relation to the intended use of the asset) and is summarised below by asset category.

Motor vehicles are valued using the current 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 an experienced fleet manager in the Authority who set relevant depreciation rates during use to reflect the utilisation of the vehicles.

Plant and equipment are held at carrying amount (depreciated cost). Unless there is market evidence that current replacement costs are significantly different from the original acquisition cost, it is considered unlikely that depreciated replacements cost will be materially different from the existing carrying value.

Refer to Note 7.3 for additional information on fair value determination of plant and equipment.

Impairment of plant and equipment

The recoverable amount of primarily non-cash-generating assets of not-for-profit entities, which are typically specialised in nature and held for continuing use of their service capacity, is expected to be materially the same as fair value determined under AASB 13 Fair Value Measurement, with the consequence that AASB 136 does not apply to such assets that are regularly revalued.

**Notes to the Financial Report
for the year ended 30 June 2019**

4.1.1 Depreciation and amortisation

Charge for the period			\$
	2019	2018	
Motor vehicles	134,380	114,154	
Office furniture and equipment	16,278	48,080	
Plant and equipment	52,270	76,511	
Total depreciation and amortisation	202,928	238,745	

All plant and equipment and other non-financial physical assets that have finite useful lives, are depreciated.

Depreciation is generally 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	(years) Useful life
Motor vehicles	4 to 8
Office furniture and equipment	3 to 25
Plant and equipment	3 to 15

The estimated useful lives, residual values and depreciation method are reviewed at the end of each annual reporting period, and adjustments made where appropriate.

Leasehold improvements are depreciated over the shorter of the lease term and their useful lives.

4.1.2 Reconciliation of movements in carrying amounts of plant and equipment

					\$
2019	Motor vehicles at fair value	Office furniture and equipment at fair value	Plant and equipment at fair value	Total	
Opening balance	550,687	26,277	135,055	712,019	
Additions	232,601	24,410	51,995	309,006	
Disposals	(122,196)	-	-	(122,196)	
Depreciation	(134,380)	(16,277)	(52,271)	(202,928)	
Closing balance	526,712	34,410	134,790	695,902	

					\$
2018	Motor vehicles at fair value	Office furniture and equipment at fair value	Plant and equipment at fair value	Total	
Opening balance	486,037	74,357	150,921	711,315	
Additions	254,680	-	60,645	315,325	
Disposals	(75,876)	-	-	(75,876)	
Depreciation	(114,154)	(48,080)	(76,511)	(238,745)	
Closing balance	550,687	26,277	135,055	712,019	

**Notes to the Financial Report
for the year ended 30 June 2019**

4.2 Intangible assets

	Computer software		Total	
	2019	2018	2019	2018
Gross carrying amount				
Opening balance	597,540	597,540	597,540	597,540
Closing balance	597,540	597,540	597,540	597,540
Accumulated amortisation				
Opening balance	(356,107)	(156,947)	(356,107)	(156,947)
Amortisation of intangible non-produced assets	(199,160)	(199,160)	(199,160)	(199,160)
Closing balance	(555,267)	(356,107)	(555,267)	(356,107)
Net book value at the end of the financial year	42,273	241,433	42,273	241,433

Initial recognition

Purchased intangible assets are initially recognised at cost. Subsequently, intangible assets with finite useful lives are carried at cost less accumulated amortisation and accumulated impairment losses. 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.

The Authority does not have any internally generated intangible assets.

Subsequent measurement

Intangible non-produced assets with finite lives are amortised on a straight line basis over their useful lives. The amortisation period is 3 years.

The Authority does not have any intangible produced assets.

Significant intangible assets

The Authority has capitalised software expenditure for the acquisition of its Technology One and related software. The carrying amount of the capitalised software expenditure is \$42,273 (2018: \$241,433). Its useful life is 3 years and will be fully amortised in 2020.

4.3 Investments and other financial assets

	2019	2018
Current investments and other financial assets		
Term deposits ^(a)		
Australian dollar term deposits > three months	-	36,000,000
Total current investments and other financial assets	-	36,000,000

(a) Term deposits under 'investments and other financial assets' class include only deposits with a maturity greater than 90 days

Notes to the Financial Report
for the year ended 30 June 2019

5. OTHER ASSETS AND LIABILITIES

Introduction

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

Structure

- 5.1 Receivables
- 5.2 Payables
- 5.3 Prepayments

5.1 Receivables

	\$	
	2019	2018
Contractual		
Accrued investment income	-	7,771
Income receivable	-	5,917
Other receivables	2,010,330	826,154
Statutory		
Levies receivable	424,828	-
Total receivables	2,435,158	839,843
Represented by:		
Current receivables	2,435,158	839,843

Contractual receivables are classified as financial instruments and categorised as 'financial assets at amortised costs'. 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 measured at amortised cost using the effective interest method, less any impairment.

Statutory receivables 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. The Authority applies AASB 9 for initial measurement of the statutory receivables and as a result statutory receivables are initially recognised at fair value plus any directly attributable transaction cost.

**Notes to the Financial Report
for the year ended 30 June 2019**

5.2 Payables

	2019	2018
Contractual		
Supplies and services	656,634	499,580
Amounts payable to government and agencies	54,173	-
Statutory		
GST payable	100,000	-
Total payables	810,807	499,580
Represented by		
Current payables	810,807	499,580

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 less than 30 days. No interest is charged on contractual payables.

The terms and conditions of amounts payable to the government and agencies vary according to the particular agreements and as they are not legislative payables, they are not classified as financial instruments.

Maturity analysis of contractual payables ^(a)

	Carrying amount	Nominal amount	Less than 1 month	1 - 3 months	Maturity dates 3 months - 1 year	1-5 years	5+ years
2019							
Supplies and services	656,634	656,634	656,634	-	-	-	-
Amounts payable to government and agencies	54,173	54,173	54,173	-	-	-	-
Total	710,807	710,807	710,807	-	-	-	-
2018							
Supplies and services	499,580	499,580	499,580	-	-	-	-
Amounts payable to government and agencies	-	-	-	-	-	-	-
Total	499,580	499,580	499,580	-	-	-	-

(a) Maturity analysis is presented using the contractual undiscounted cash flows.

5.3 Other non-financial assets

	2019	2018
Current other assets		
Prepayments	24,533	-
Total current other assets	24,533	-
Total other Assets	24,533	-

Other non-financial assets include prepayments, which represent payments in advance of receipt of goods or services or the payments made for services covering a term beyond that financial accounting period.

Notes to the Financial Report for the year ended 30 June 2019

6. HOW WE FINANCED OUR OPERATIONS

Introduction

This section provides information on the sources of finance utilised by the Authority during its operations and other information related to financing activities of the Authority.

This section includes disclosures of balances that are financial instruments (such as cash balances). Notes 7.1 and 7.3 provide additional, specific financial instrument disclosures.

Structure

6.1 Cash flow information and balances

6.2 Commitments for expenditure

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.

	\$	
	2019	2018
Cash on hand	1,000	1,000
Cash and deposits disclosed in the balance sheet	39,083,717	322,708
Term deposits maturing in less than 3 months	-	4,827,211
Balance as per cash flow statement	39,084,717	5,150,919

The Authority is responsible for the facilitation and coordination of catchments in an integrated and sustainable manner. This is achieved by undertaking projects funded by state and federal government. The Authority receives 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 Energy, Environment and Climate Change and the Minister for Water.

The projects funded by the state and commonwealth governments can be undertaken over multiple financial years and 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. At balance date the Authority has significant cash and cash equivalents that will be utilised to complete these projects in future financial years.

6.1.1 Reconciliation of net result for the period to cash flow from operating activities

	\$	
	2019	2018
Net result for the period	(982,521)	1,230,063
Non-cash movements		
(Gain)/loss on disposal of non-current assets	(18,868)	(27,530)
Depreciation and amortisation of non-current assets	402,089	437,904
Movements in assets and liabilities		
Decrease/(increase) in receivables	(1,595,315)	(712,612)
(Decrease)/increase in employee related provisions	9,663	(71,763)
Decrease/(increase) in prepayments	(24,533)	-
(Decrease)/Increase in payables	311,227	(299,399)
Net cash flows from/(used in) operating activities	(1,898,258)	556,663

**Notes to the Financial Report
for the year ended 30 June 2019**

Commitments for future expenditure include operating and capital commitments arising from contracts. These commitments are recorded below at their nominal value and are exclusive of GST. Where it is considered appropriate and provides additional relevant information to users, the net present values of significant individual projects are stated. These future expenditures cease to be disclosed as commitments once the related liabilities are recognised in the balance sheet.

6.2.1 Total commitments payable

					\$
Nominal amounts	Less than 1				
2019	year	1 - 5 years	5+ years	Total	
Other commitments payable	2,404,865	440,420	-	2,845,285	
Total commitments	2,404,865	440,420	-	2,845,285	

					\$
Nominal amounts	Less than 1				
2018	year	1 - 5 years	5+ years	Total	
Other commitments payable	1,665,791	286,625	-	1,952,417	
Total commitments	1,665,791	286,625	-	1,952,417	

Notes to the Financial Report
for the year ended 30 June 2019

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 related 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 instrument. Due to the nature of the Authority's activities, certain financial assets and financial liabilities arise under statute rather than a contract (for example taxes, fines and penalties). Such assets and liabilities do not meet the definition of financial instruments in AASB 132 *Financial Instruments: Presentation*.

From 1 July 2018, the Authority applies AASB 9 and classifies all of its financial assets based on the business model for managing the assets and the asset's contractual terms.

Categories of financial assets under AASB 9

Financial assets at amortised cost

Financial assets are measured at amortised costs if both of the following criteria are met and the assets are not designated as fair value through net result:

- the assets are held by the Authority to collect the contractual cash flows, and
- the assets' contractual terms give rise to cash flows that are solely payments of principal and interests.

These assets are initially recognised at fair value plus any directly attributable transaction costs and subsequently measured at amortised cost using the effective interest method less any impairment.

The Authority recognises the following assets in this category:

- ☐ cash and deposits; and
- ☐ receivables (excluding statutory receivables)

Categories of financial assets previously under AASB 139

Loans and receivables and cash are financial instrument assets with fixed and determinable payments that are not quoted on an active market. These assets and liabilities are initially recognised at fair value plus any directly attributable transaction costs.

Subsequent to initial measurement, loans and receivables are measured at amortised cost using the effective interest method (and for assets, less any impairment). The Authority recognises the following assets in this category:

- cash and deposits
- receivables (excluding statutory receivables); and
- term deposits.

Held to maturity financial assets: If the Authority has the positive intent and ability to hold nominated investments to maturity, then such financial assets may be classified as held to maturity. These are recognised initially at fair value plus any directly attributable transaction costs. Subsequent to initial recognition, held to maturity financial assets are measured at amortised cost using the effective interest method, less any impairment losses.

The Authority makes limited use of this classification because any sale or reclassification of more than an insignificant amount of held to maturity investments not close to their maturity, would result in the whole category being reclassified as available-for-sale. The held to maturity category includes term deposits which the Authority intends to hold to maturity.

**Notes to the Financial Report
for the year ended 30 June 2019**

Categories of financial liabilities under AASB 9 and previously under AASB 139

Financial liabilities at amortised cost are initially recognised on the date they are 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. The Authority recognises accounts payable (excluding statutory payables) in this category.

7.1.1 Financial instruments: Categorisation

				\$
2019	Cash and deposits	Financial assets at amortised cost (AC)	Financial liabilities at amortised cost (AC)	Total
Contractual financial assets				
Cash and deposits	39,084,717	-	-	39,084,717
Receivables ^(a)				
Other contractual receivables	-	2,010,330	-	2,010,330
Total contractual financial assets	39,084,717	2,010,330	-	41,095,048
Contractual financial liabilities				
Supplies and services	-	-	656,634	656,634
Amounts payable to government and agencies	-	-	54,173	54,173
Total contractual financial liabilities	-	-	710,807	710,807

(a) The total amounts disclosed here exclude statutory amounts

				\$
2018	Cash and deposits	Financial assets at amortised cost (AC)	Financial liabilities at amortised cost (AC)	Total
Contractual financial assets				
Cash and deposits	5,150,919	-	-	5,150,919
Receivables ^(a)				
Accrued investment income	-	7,772	-	7,772
Income receivable	-	-	-	5,917
Other contractual receivables	-	832,071	-	826,154
Investments and other financial assets				
Term deposits	-	36,000,000	-	36,000,000
Total contractual financial assets	5,150,919	36,839,843	-	41,990,762
Contractual financial liabilities				
Supplies and services	-	-	499,580	499,580
Total contractual financial liabilities	-	-	499,580	499,580

Note:

(a) The total amounts disclosed here exclude statutory amounts (e.g. amounts owing from Victorian Government and GST input tax credit recoverable and taxes payable).

**Notes to the Financial Report
for the year ended 30 June 2019**

7.1.2 Financial instruments: Net holding gain/(loss) by category

	Total interest income/ (expense)	\$ Total
2019		
Contractual financial assets		
Financial assets at amortised cost – other than on derecognition	775,255	775,255
Total contractual financial assets	775,255	775,255

	Total interest income/ (expense)	\$ Total
2018		
Contractual financial assets		
Financial assets at amortised cost – other than on derecognition	674,294	674,294
Total contractual financial assets	674,294	674,294
Contractual financial liabilities		
Financial liabilities at amortised cost	(119)	(119)
Total contractual financial liabilities	(119)	(119)

7.1.3 Financial risk management objectives and policies

As a whole, the Authority's financial risk management program seeks to manage credit, liquidity and interest rate risks and the associated volatility of its financial performance. The Authority is not exposed to foreign currency or equity price risks.

Details of the significant accounting policies and methods adopted, including the criteria for recognition, the basis of measurement, and the basis on which income and expenses are recognised, with respect to each class of financial asset, financial liability and equity instrument above are disclosed in Note 7.3 to the financial statements.

The main purpose in holding financial instruments is to prudentially manage the Authority's financial risks within the government policy parameters.

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 Board 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 debtors are the Victorian and Commonwealth Government. For debtors other than the Government, it is the Authority's policy to only deal with entities with high credit ratings, where appropriate.

In addition, the Authority does not engage in hedging for its contractual financial assets and mainly obtains contractual financial assets that are on fixed interest, except for cash and deposits, which are mainly cash at bank. As with the policy for debtors, the Authority's policy is to only deal with banks with high credit ratings.

Provision of impairment for contractual financial assets is recognised when there is objective evidence that the Authority will not be able to collect a receivable. Objective evidence includes financial difficulties of the debtor, default payments, debts that are more than 60 days overdue, and changes in debtor credit ratings.

Except as otherwise detailed in the following table, the carrying amount of contractual financial assets recorded in the financial statements, net of any allowances for losses, represents the Authority's maximum exposure to credit risk without taking account of the value of any collateral obtained.

There has been no material change to the Authority's credit risk profile in 2018-19.

**Notes to the Financial Report
for the year ended 30 June 2019**

Credit quality of contractual financial assets

\$

2019	Financial institution (triple-A credit rating)	Government agencies (triple-A credit rating)	Other (min triple-B credit rating)	Total
Financial assets				
Financial assets with loss allowance measured at 12-month expected credit loss				
Cash and deposits (not assessed for impairment due to materiality)	36,006,799	1,066,588	-	39,083,717
Contractual receivables ^(a)	-	2,010,330	-	-
Total contractual financial assets	36,006,799	3,076,918	-	39,083,717

(a) The total amounts disclosed here exclude statutory amounts

Credit quality of contractual financial assets that are neither past due nor impaired

\$

2018	Government agencies (triple-A credit rating)	Other (min triple-B credit rating)	Total
Financial assets			
Cash and deposits	4,828,211	322,708	5,150,919
Contractual receivables ^(a)	839,842	-	839,842
Investments and other financial assets	36,000,000	-	36,000,000
Total contractual financial assets	41,668,053	322,708	41,990,761

(a) The total amounts disclosed here exclude statutory amounts

Impairment of financial assets under AASB 9 – applicable from 1 July 2018

From 1 July 2018, the Authority has been recording the allowance for expected credit loss for the relevant financial instruments, replacing AASB 139's incurred loss approach with AASB 9's Expected Credit Loss approach. Subject to AASB 9 impairment assessment include the Authority's contractual receivables and statutory receivables.

While cash and cash equivalents are also subject to the impairment requirements of AASB 9, there was no identified impairment loss.

Contractual receivables at amortised cost

Contracted 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 the result, the Authority does not estimate any doubtful debts or credit risk associated with its contracted receivables for the 12 month period. No loss allowance recognised at 30 June 2018 under AASB 139. No additional loss allowance required upon transition into AASB 9 on 1 July 2018.

Notes to the Financial Report for the year ended 30 June 2019

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 the result, the Authority does not estimate any credit risk associated with its statutory receivables for the 12 month period. No loss allowance recognised at 30 June 2018 under AASB 139. No additional loss allowance required upon transition into AASB 9 on 1 July 2018.

Financial instruments: Liquidity risk

Liquidity risk arises from being unable to meet financial obligations as they fall due. The Authority settles financial obligations within 30 days and in the event of a dispute, making payments within 30 days from the date of resolution.

The Authority is exposed to liquidity risk mainly through the financial liabilities as disclosed in the face of the balance sheet. The Authority manages its liquidity risk by:

- maintaining an adequate level of uncommitted funds that can be drawn at short notice to meet its short-term obligations;
- holding investments and other contractual financial assets that are readily able to be liquidated; and
- careful maturity planning of its financial obligations based on forecasts of future cash flows.

The Authority's exposure to liquidity risk is deemed insignificant based on prior periods' data and current assessment of risk. Cash for unexpected events is generally sourced from liquidation of available-for-sale financial investments.

Financial instruments: Interest rate risk

Fair value interest rate risk is the risk that the fair value of a financial instrument will fluctuate because of changes in market interest rates. The Authority does not hold any interest bearing financial instruments that are measured at fair value, and therefore has no exposure to fair value interest rate 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 has minimal exposure to cash flow interest rate risks through cash and deposits and term deposits that are at floating rate.

The Authority manages this risk by mainly undertaking fixed rate financial instruments with relatively even maturity profiles, with only insignificant amounts of financial instruments at floating rate. Management has concluded for cash at bank, as financial assets that can be left at floating rate without necessarily exposing the Authority to significant bad risk, management monitors movement in interest rates on a frequent basis.

The carrying amounts of financial assets and financial liabilities that are exposed to interest rates and the Authority's sensitivity to interest rate risk are set out in the table that follows.

Interest rate exposure of financial instruments				\$
2019	Weighted average interest rate %	Carrying amount	Variable interest rate	Non bearing interest
Financial assets				
Cash and deposits	1.38%	39,084,717	39,083,717	1,000
Receivables^(a)				
Other contractual receivables		2,010,330	-	2,010,330
Total financial assets		41,095,048	39,083,717	2,011,330
Financial liabilities				
Payables^(a)				
Supplies and services		656,634	-	656,634
Amounts payable to government and agencies		54,173	-	54,173
Total financial liabilities		710,807	-	710,807

(a) The total amounts disclosed here exclude statutory amounts

**Notes to the Financial Report
for the year ended 30 June 2019**

7.2 Contingent assets and contingent liabilities

The Authority does not have any contingent assets or 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.

This section sets out information on how the Authority determined fair value for financial reporting purposes. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The following assets and liabilities are carried at fair value:

- plant and equipment

In addition, the fair value of other assets that 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.

The Authority monitors changes in the fair value of each asset and liability through relevant data sources to determine whether revaluation is required.

How this section is structured

For those assets and liabilities for which fair values are determined, the following disclosures are provided:

- carrying amount and the fair value (which would be the same for those assets measured at fair value);
- which level of the fair value hierarchy was used to determine the fair value; and
- in respect of those assets and liabilities subject to fair value determination using Level 3 inputs:
 - a reconciliation of the movements in fair values from the beginning of the year to the end; and
 - details of significant unobservable inputs used in the fair value determination.

This section is divided between disclosures in connection with fair value determination for financial instruments (refer to Note 7.3.1) and non-financial physical assets (refer to Note 7.3.2).

7.3.1 Fair value determination of financial assets and liabilities

The fair values and net fair values of financial assets and liabilities are determined as follows:

- Level 1 – the fair value of financial instrument with standard terms and conditions and traded in active liquid markets are determined with reference to quoted market prices;
- Level 2 – the fair value is determined using inputs other than quoted prices that are observable for the financial asset or liability, either directly or indirectly; and
- Level 3 – the fair value is determined in accordance with generally accepted pricing models based on discounted cash flow analysis using unobservable market inputs.

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 2019-20 reporting period.

These financial instruments include:

Financial assets	Financial liabilities
Cash and deposits	Payables:
Receivables:	· supplies and services
· income receivable	· amounts payable to government and agencies
· other contractual receivables	

**Notes to the Financial Report
for the year ended 30 June 2019**

7.3.2 Fair value determination of non-financial physical assets

Fair value measurement hierarchy

Fair value measurement hierarchy					\$
	Carrying amount as at	Fair value measurement at end of reporting period using:			
2019	30 June	Level 1	Level 2	Level 3	
Plant, equipment and vehicles at fair value:					
Motor vehicles	526,712	-	526,712	-	
Office furniture and equipment	34,410	-	-	34,410	
Plant and equipment	134,780	-	-	134,780	
Total of plant, equipment and vehicles at fair value	695,902	-	526,712	169,190	
					\$
2018					
Plant, equipment and vehicles at fair value:					
Motor vehicles	550,687	-	550,687	-	
Office furniture and equipment	26,277	-	-	26,277	
Plant and equipment	135,055	-	-	135,055	
Total of plant, equipment and vehicles at fair value	712,019	-	550,687	161,332	

There have been no transfers between levels during the period.

Vehicles are held at fair value and fair value is determined using the current 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 the Chief Finance Officer of the Authority who sets relevant depreciation rates during use to reflect the utilisation of the vehicles.

Plant and equipment is held at fair value. When plant and 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 current replacement cost method. As depreciation adjustments considered as significant, unobservable inputs, these assets are classified as Level 3 fair value measurements.

There were no changes in valuation techniques throughout the period to 30 June 2019
For all assets measured at fair value, the current use is considered the highest and best use.

**Notes to the Financial Report
for the year ended 30 June 2019**

Reconciliation of Level 3 fair value movements

\$

2019	Office furniture and equipment	Plant and equipment	Total
Opening balance	26,277	135,055	161,332
Purchases (sales)	(13,720)	(76,491)	(90,211)
Depreciation	21,853	76,216	98,069
Closing balance	34,410	134,780	169,190

\$

2018			
Opening balance	74,357	150,921	225,278
Purchases (sales)	(152,852)	(124,290)	(277,142)
Depreciation	104,772	108,424	213,196
Closing balance	26,277	135,055	161,332

There were no unrealised gains or losses (2018: nil) on non-financial assets.

Description of significant unobservable inputs to Level 3 valuations

2019 and 2018	Valuation technique	Significant unobservable inputs
Office furniture and equipment	Replacement cost	Cost per unit Useful life of office furniture and equipment
Plant and equipment	Replacement cost	Cost per unit Useful life of plant and equipment

Significant unobservable inputs have remained unchanged since June 2018.

**Notes to the Financial Report
for the year ended 30 June 2019**

8. OTHER DISCLOSURES

Introduction

This section includes additional material disclosures required by accounting standards or otherwise, for the understanding of this financial report.

Structure

- 8.1 Other economic flows included in net result
- 8.2 Reserves
- 8.3 Responsible persons
- 8.4 Remuneration of executives
- 8.5 Related parties
- 8.6 Remuneration of auditors
- 8.7 Subsequent events
- 8.8 Australian Accounting Standards issued that are not yet effective
- 8.9 Glossary of technical terms

8.1 Other economic flows included in net result

Other economic flows are changes in the volume or value of an asset or liability that do not result from transactions. Other gains/(losses) from other economic flows include the gains or losses from the revaluation of the present value of the long service leave liability due to changes in bond interest rates.

	\$	
	2019	2018
Net gain/(loss) on non-financial assets		
Net gain/(loss) on disposal of plant and equipment	18,868	27,530
Total net gain/(loss) on non-financial assets	18,868	27,530
Total other gains/(losses) from other economic flows	18,868	

8.2 Reserves

	\$	
	2019	2018
Committed funds reserve ^(a)		
Balance at beginning of financial year	5,407,099	5,665,225
Transfers to/(from) accumulated surplus	(2,169,069)	(258,126)
Balance at end of financial year	3,238,030	5,407,099
Salinity offset reserve ^(b)		
Balance at beginning of financial year	30,466,348	29,018,089
Transfers to/(from) accumulated surplus	1,109,672	1,448,260
Balance at end of financial year	31,576,020	30,466,348
Capital renewals reserve ^(c)		
Balance at beginning of financial year	1,000,000	1,000,000
Transfers to/(from) accumulated surplus	-	-
Balance at end of financial year	1,000,000	1,000,000
Total reserves	35,814,050	36,873,447

(a) The committed funds reserve contains amounts allocated to the completion of specific projects.

(b) The salinity offset reserve contains the amount held by the Authority in accordance with ministerial policies for managing water use licences in salinity impact zones under the *Water Act 1989*.

(c) The capital renewals reserve contains amounts that have been set aside by the Authority for the purpose of funding capital projects.

**Notes to the Financial Report
for the year ended 30 June 2019**

8.3 Responsible persons

In accordance with the Ministerial Directions issued by the Minister for Finance under the FMA, the following disclosures are made regarding responsible persons for the reporting period.

Names

The persons who held the positions of Ministers and Accountable Officer in the Authority are as follows:

The Hon. Lisa Neville MLA, Minister for Water	1 July 2018 to 30 June 2019
The Hon. Lily D'Ambrosio MP, Minister for Energy, Environment and Climate Change	1 July 2018 to 30 June 2019

Responsible Persons

Sharyon Peart, board chair	1 July 2018 to 30 June 2019
Dr John Cooke, board member, deputy chair	1 July 2018 to 30 June 2019
Allison McTaggart, board member	1 July 2018 to 30 June 2019
Anthony Martin, board member	1 July 2018 to 30 June 2019
Geoff Anderson, board member	1 July 2018 to 30 June 2019
Kellie Nulty, board member	1 July 2018 to 30 June 2019
Robert Matthews, board member	1 July 2018 to 30 June 2019
Jacquelyn Turfey, board member	1 July 2018 to 30 June 2019

Accountable Officer

Jennifer Collins, Chief Executive Officer	1 July 2018 to 30 June 2019
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Remuneration

Remuneration received or receivable by the Accountable Officer in connection with management of the Authority during the reporting period was in the range: \$240,000-\$250,000 (2018: \$230,000-\$240,000)

The number of responsible persons whose remuneration from the Authority were as follows:

	2019	2018
\$0 to \$9,999	2	3
\$10,000 to \$19,999	5	6
\$20,000 to \$29,999	-	1
\$30,000 to \$39,999	1	-
\$230,000 to \$240,000	-	1
\$240,000 to \$250,000	1	-
Total number of responsible persons	9	11
Total remuneration \$	422,828	434,325

	2019	2018
Remuneration of executive officers (including Key Management Personnel disclosed in Note 8.5)		
Short-term employee benefits	310,585	309,297
Post-employment benefits	35,842	55,269
Other long-term benefits	6,642	6,132
Termination benefits	-	-
Total number of responsible persons	9	11
Total compensation ^(a)	353,069	370,699

8.4 Remuneration of executives

The Authority does not have any executive officers that meet the definition of Financial Reporting Directions (FRDs) 21C disclosures of executive officers, other than ministers and the accountable officer, during the reporting period.
The accountable officer's remuneration has been disclosed in note 8.5 Related parties.

**Notes to the Financial Report
for the year ended 30 June 2019**

8.5 Related parties

The Mallee Catchment Management Authority is statutory authority established by the *Catchment and Land Protection Act 1994*.

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.

Any related party transactions have been entered into on an arm's length basis.

Key management personnel of the Authority includes Portfolio Ministers, board members and the chief executive officer;

- The Hon Lisa Neville MLA, Minister for Water
- The Hon Lily D'Ambrosio MP, Minister for Energy, Environment and Climate Change
- Sharyon Peart, board chair
- Dr John Cooke, board member, deputy chair
- Anthony Martin, board member
- Allison McTaggart, board member
- Geoff Anderson, board member
- Kellie Nulty, board member
- Robert Matthews, board member
- Jacquelyn Turfey, board member
- Jennifer Collins, Chief Executive Officer

The compensation detailed below excludes the salaries and benefits the Portfolio Ministers receives. The Ministers' remuneration and allowances are 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 benefits or deferred compensation.

Termination benefits include termination of employment payments, such as severance packages.

	\$	
Compensation of KMP	2019	2018
Short-term employee benefits	310,585	309,297
Post-employment benefits	35,842	55,269
Other long-term benefits	6,642	6,132
Termination benefits	-	-
Total compensation ^(a)	353,069	370,699

(a) Note that KMP are also reported in the disclosure of remuneration of executive officers (Note 8.4).

**Notes to the Financial Report
for the year ended 30 June 2019**

Government Related Entities

During the year the Authority reported related party transactions with the following government related entities:

Name of Government Entity	Details Transaction	Nature of Relationship	Receipts	Outstanding Receipts	Payments	Commitments
Department of Environment Land Water and Planning	Provision grant funding to undertake projects	Significant influence	9,366,897	-	-	-
Department of Environment Land Water and Planning	Purchase of goods/services to undertake projects	Significant influence	-	-	1,308,815	329,190
Department of Jobs, Precincts and Regions	Purchase of goods/services to undertake projects	Significant influence	-	-	666,519	606,980
Treasury Corporation Victoria	Provision grant funding to undertake projects	Significant influence	371,304	52,178	-	-
Treasury Corporation Victoria	Banking - Interest on TCV term deposits	Government service provider	480,054	-	-	-
Department of Environment and Energy	Provision grant funding to undertake projects	Significant influence	-	1,843,761	-	-
Lower Murray Water	Salinity levies for managing water use licences in salinity impact zones.	Joint responsibility	2,789,242	-	-	-
Lower Murray Water	Purchase of goods/services to undertake projects	Joint responsibility	-	112,821	135,621	13,420
East Gippsland Catchment Management Authority	Purchase of goods/services to undertake projects	Joint responsibility	3,733	-	14,300	-
North Central Catchment Management Authority	Purchase of goods/services to undertake projects	Joint responsibility	-	-	40,000	-
North East Catchment Management Authority	Purchase of goods/services to undertake projects	Joint responsibility	-	-	20,000	-
Wimmera Catchment Management Authority	Purchase of goods/services to undertake projects	Joint responsibility	-	-	40,000	-
Goulburn Broken Catchment Management Authority	Purchase of goods/services to undertake projects	Joint responsibility	-	-	40,000	-
Port Phillip and Westernport Catchment Management Authority	Purchase of goods/services to undertake projects	Joint responsibility	16,500	-	27,500	-
Victorian Government Solicitors Office	Purchase of goods/services to undertake projects	Government service provider	-	-	11,683	-

Notes to the Financial Report for the year ended 30 June 2019

Other Related Party Transactions

During the year the Authority reported related party transactions with the following key management personnel:

Name of counterparty	Details Transaction	Relationship	Receipts	Outstanding Receipts	Payments	Commitments
Department of Environment Land Water and Planning	Purchase of goods/services to undertake projects	Contractor	9,366,897	-	-	-
Department of Environment Land Water and Planning	Purchase of goods/services to undertake projects	Contractor	-	-	1,308,815	329,190
Int Tec Mildura	Purchase of goods/services to undertake projects	Consultant	-	-	360,115	29,018
Lower Murray Water	Salinity levies for managing water use licences in salinity impact zones.	Board Deputy Chair	2,789,242	-	-	-
Lower Murray Water	Purchase of goods/services to undertake projects	Board Deputy Chair	-	112,821	135,621	13,420
La Trobe University	Purchase of goods/services to undertake projects	Member of La Trobe Advisory Board	-	-	163,676	-
Mallee Sustainable Farming	Purchase of goods/services to undertake projects	Director	-	-	93,500	-
Mallee Sustainable Farming	Purchase of goods/services to undertake projects	Member	-	-	93,500	-
Mallee Sustainable Farming	Purchase of goods/services to undertake projects	Contractor	-	-	93,500	-
Mallee Landcare Group	Provision/purchase of goods/services to undertake projects	Member	-	-	22,000	-
MADEC	Payments to traditional owners for cultural heritage.	Partner is a KMP	-	-	66,976	-
Murray Darling Basin Authority	Purchase of goods/services to undertake projects	Consultant	-	-	70,000	30,000
WA and RL Matthews	Payment of Incentive/Grant for on-ground works	Joint Partner	-	-	2,970	4,840
Tim Cummins and Associates	Purchase of goods/services to undertake projects	Consultant	-	-	77,281	23,950

All other transactions that have occurred with KMP and their related parties have not been considered material for disclosure. In this context, transactions are only disclosed when they are considered necessary to draw attention to the possibility that the Authority's financial position and profit or loss may have been affected by the existence of related parties, and by transactions and outstanding balances, including commitments, with such parties.

8.6 Remuneration of auditors

	2019	2018
Victorian Auditor-General's Office		
Audit or review of the financial statements	15,700	15,300
Total remuneration of auditors	15,700	15,300

(a) The Victorian Auditor-General's Office is not allowed to provide non-audit services

8.7 Subsequent events

No matters or circumstances have arisen since the end of the reporting period which significantly affected or may significantly affect the operations of the Authority, the results of those operations, or the state of affairs of the Authority in future financial years.

8.8 Australian Accounting Standards issued that are not yet effective

The following AASs become effective for reporting periods commencing after the operative dates stated.

Certain new Australian Accounting Standards (AAS) have been published which are not mandatory for the 30 June 2019 reporting period. The Authority assesses the impact of all these new standards and their early adoption where applicable.

Standard/Interpretation	Summary	Applicable for annual reporting periods beginning on	Impact on public sector entity financial statements
AASB 16 <i>Leases</i>	The key changes introduced by AASB 16 include the recognition of most operating leases (which are currently not recognised) on balance sheet, which has an impact on net debt. AASB 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases and requires lessees to account for all leases on the balance sheet by recording a Right-Of-Use (RoU) asset and a lease liability except for leases that are shorter than 12 months and leases where the underlying asset is of low value (deemed to be below \$10,000).	1-Jan-19	The assessment has indicated that most operating leases, with the exception of short term and low value leases will come on to the balance sheet and will be recognised as right of use assets with a corresponding lease liability. In the operating statement, the operating lease expense will be replaced by depreciation expense of the asset and an interest charge. The assessment has indicated that there will be no significant impact for the Authority.
AASB 15 <i>Revenue from Contracts with Customers</i>	The core principle of AASB 15 requires an entity to recognise revenue when the entity satisfies a performance obligation by transferring a promised good or service to a customer. Note that amending standard AASB 2015 8 Amendments to Australian Accounting Standards – Effective Date of AASB 15 has deferred the effective date of AASB 15 to annual reporting periods beginning on or after 1 January 2018, instead of 1 January 2017.	1-Jan-19	The changes in revenue recognition requirements in AASB 15 may result in changes to the timing and amount of revenue recorded in the financial statements. The Standard will also require additional disclosures on service revenue and contract modifications.
AASB 2016-8 Amendments to Australian Accounting Standards – Australian Implementation Guidance for Not-for-Profit Entities	This standard amends AASB 9 and AASB 15 to include requirements and implementation guidance to assist not-for-profit entities in applying the respective standards to particular transactions and events. The amendments: •require non-contractual receivable arising from statutory requirements (i.e. taxes, rates and fines) to be initially measured and recognised in accordance with AASB 9 as if those receivables are financial instruments; and clarifies circumstances when a contract with a customer is within the scope of AASB 15.	1-Jan-19	The assessment has indicated that there will be no significant impact for the Authority.

Notes to the Financial Report
for the year ended 30 June 2019

Standard/Interpretation	Summary	Applicable for annual reporting periods beginning on	Impact on public sector entity financial statements
AASB 1058 <i>Income of Not-for-Profit Entities</i>	This standard will replace AASB 1004 Contributions and establishes principles for transactions that are not within the scope of AASB 15, where the consideration to acquire an asset is significantly less than fair value to enable not-for-profit entities to further their objectives. The restructure of administrative arrangement will remain under AASB 1004.	1-Jan-19	<p>The current revenue recognition for grants is to recognise revenue up front upon receipt of the funds.</p> <p>This may change under AASB 1058, as capital grants for the construction of assets will need to be deferred. Income will be recognised over time, upon completion and satisfaction of performance obligations for assets being constructed, or income will be recognised at a point in time for acquisition of assets.</p> <p>The revenue recognition for operating grants will need to be analysed to establish whether the requirements under other applicable standards need to be considered for recognition of liabilities (which will have the effect of deferring the income associated with these grants). Only after that analysis would it be possible to conclude whether there are any changes to operating grants.</p> <p>The impact on current revenue recognition of the changes is the phasing and timing of revenue recorded in the profit and loss statement.</p>

**Notes to the Financial Report
for the year ended 30 June 2019**

Standard/Interpretation	Summary	Applicable for annual reporting periods beginning on	Impact on public sector entity financial statements
AASB 2018-8 Amendments to Australian Accounting Standards – Right of use asset	This standard amends various AASB standards to provide an option for not-for-profit entities to not apply the fair value initial measurement requirements to a class or classes of right of use assets arising under leases with significantly below-market terms and conditions principally to enable the entity to further its objectives. This Standard also adds additional disclosure requirements to AASB 16 for not-for-profit entities that elect to apply this option.	1-Jan-19	The assessment has indicated that there will be no significant impact for the Authority.
AASB 17 <i>Insurance Contracts</i>	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 reinsurance contract that an insurer holds. It also provides requirements for presentation and disclosure to enhance comparability between entities. This standard does not currently apply to not-for-profit public sector entities. The AASB is undertaking further outreach to determine the applicability of this standard to the not-for-profit public sector.	1-Jan-21	The assessment has indicated that there will be no significant impact for the Authority.

Standard/Interpretation	Summary	Applicable for annual reporting periods beginning on	Impact on public sector entity financial statements
AASB 2018-7 Amendments to Australian Accounting Standards – Definition of Material	This standard amends AASB 101 Presentation of Financial Statements and AASB 108 Accounting Policies, Changes in Accounting Estimates and Errors. The amendments refine the definition of material in AASB 10 Events after the Reporting Period, include some supporting requirements in AASB 101 in the definition to give it more prominence and clarify the explanation accompanying the definition of material. The amendments also clarify the definition of material and its application by improving the wording and aligning the definition across AASB standards and other publications.	1-Jan-20	The new definition provides more clarification and explanation accompanying the definition of material which is consistent with the Authority's current materiality tests. The assessment has indicated that there will be no significant impact for the public sector.

**Notes to the Financial Report
for the year ended 30 June 2019**

8.9 Glossary of technical terms

The following is a summary of the major technical terms used in this report.

Amortisation is the expense which 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'.

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 a department 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.

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.

Financial asset is any asset that is:

- cash;
 - an equity instrument of another entity;
 - a contractual right:
 - to receive cash or another financial asset from another entity; or
 - to exchange financial assets or financial liabilities with another entity under conditions that are potentially favourable to the entity; or
 - 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 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
 - 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

**Notes to the Financial Report
for the year ended 30 June 2019**

Financial statements comprise:

- a balance sheet as at the end of the period;
- a comprehensive operating statement for the period;
- a statement of changes in equity for the period;
- a cash flow statement for the period;
- notes, comprising a summary of significant accounting policies and other explanatory information;
- comparative information in respect of the preceding period as specified in paragraph 38 of AASB 101 *Presentation of Financial Statements*; and
- a statement of financial position as at the beginning of the preceding period when an entity applies an accounting policy retrospectively or makes a retrospective restatement of items in its financial statements, or when it reclassifies items in its financial statements in accordance with paragraphs 41 of AASB 101.

Grant expenses and other transfers are transactions in which one unit provides goods, services, assets (or extinguishes a liability) or labour to another unit without receiving approximately equal value in return. Grants can either be operating or capital in nature.

While grants to governments may result in the provision of some goods or services to the transferor, they do not give the transferor a claim to receive directly benefits of approximately equal value. For this reason, grants are referred to by the AASB as involuntary transfers and are termed non reciprocal transfers. Receipt and sacrifice of approximately equal value may occur, but only by coincidence. For example, governments are not obliged to provide commensurate benefits, in the form of goods or services, to particular taxpayers in return for their taxes.

Grants can be paid as general purpose grants which refer to grants that are not subject to conditions regarding their use.

Alternatively, they may be paid as specific purpose grants which are paid for a particular purpose and/or have conditions attached regarding their use.

General government sector comprises all government departments, offices and other bodies engaged in providing services free of charge or at prices significantly below their cost of production. General government services include those which are mainly non market in nature, those which are largely for collective consumption by the community and those which involve the transfer or redistribution of income. These services are financed mainly through taxes, or other compulsory levies and user charges.

Grants for on passing are grants paid to one institutional sector (e.g. a State general government entity) to be passed on to another institutional sector (e.g. local government or a private non-profit institution).

Infrastructure systems provide essential services used in the delivery of final services or products. They are generally a complex interconnected network of individual assets and mainly include sewerage systems, water storage and supply systems, and public transport assets owned by the State.

Interest expense represents costs incurred in connection with borrowings. It includes interest on advances, loans, overdrafts, bonds and bills, deposits, interest components of finance lease repayments, 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.

Investment properties are properties held to earn rentals or for capital appreciation or both. Investment properties exclude properties held to meet service delivery objectives of the State of Victoria.

Joint ventures are contractual arrangements between the Authority and one or more other parties to undertake an economic activity that is subject to joint control and have rights to the net assets of the arrangement. Joint control only exists when the strategic financial and operating decisions relating to the activity require the unanimous consent of the parties sharing control (the venturers).

Leases are rights to use an asset for an agreed period of time in exchange for payment. Leases are classified at their inception as either operating or finance leases based on the economic substance of the agreement so as to reflect the risks and rewards incidental to ownership. Leases of infrastructure, property, plant and equipment are classified as finance leases whenever the terms of the lease transfer substantially all the risks and rewards of ownership from the lessor to the lessee. All other leases are classified as operating leases.

Notes to the Financial Report for the year ended 30 June 2019

Net acquisition of non-financial assets (from transactions) are purchases (and other acquisitions) of non-financial assets less sales (or disposals) of non-financial assets less depreciation plus changes in inventories and other movements in non-financial assets. Includes only those increases or decreases in non-financial assets resulting from transactions and therefore excludes write offs, impairment write downs and revaluations.

Net financial liabilities is calculated as liabilities less financial assets, other than equity in PNFCs and PFCs. This measure is broader than net debt as it includes significant liabilities, other than borrowings (e.g. accrued employee liabilities such as superannuation and long service leave entitlements). For the PNFC and PFC sectors, it is equal to negative net financial worth.

Net financial worth is equal to financial assets minus liabilities. It is a broader measure than net debt as it incorporates provisions made (such as superannuation, but excluding depreciation and bad debts) as well as holdings of equity. Net financial worth includes all classes of financial assets and liabilities, only some of which are included in net debt.

Net gain on equity investments in other sector entities measured at proportional share of the carrying amount of net assets/(liabilities) comprises the net gains relating to the equity held by the general government sector in other sector entities. It arises from a change in the carrying amount of net assets of the subsidiaries. The net gains are measured based on the proportional share of the subsidiary's carrying amount of net assets/(liabilities) before elimination of inter sector balances.

Net lending/borrowing is the financing requirement of government, calculated as the net operating balance less the net acquisition of non-financial assets. It also equals transactions in financial assets less transactions in liabilities. A positive result reflects a net lending position and a negative result reflects a net borrowing position.

Net operating balance – net result from transactions: Net result from transactions or net operating balance is a key fiscal aggregate and is revenue from transactions minus expenses from transactions. It is a summary measure of the ongoing sustainability of operations. It excludes gains and losses resulting from changes in price levels and other changes in the volume of assets. It is the component of the change in net worth that is due to transactions and can be attributed directly to government policies.

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'.

Net worth is calculated as assets less liabilities, which is an economic measure of wealth.

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.

Non-financial public sector represents the consolidated transactions and assets and liabilities of the general government and PNFC sectors. In compiling statistics for the non-financial public sector, transactions and debtor/creditor relationships between sub-sectors are eliminated to avoid double counting.

Non-produced assets are assets needed for production that have not themselves been produced. They include land, subsoil assets, and certain intangible assets. Non-produced intangibles are intangible assets needed for production that have not themselves been produced. They include constructs of society such as patents.

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 '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.

**Notes to the Financial Report
for the year ended 30 June 2019**

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).

Public financial corporations are bodies primarily engaged in the provision of financial intermediation services or auxiliary financial services. They are able to incur financial liabilities on their own account (e.g. taking deposits, issuing securities or providing insurance services). Estimates are not published for the public financial corporation sector.

The public non financial corporation (PNFC) sector comprises bodies mainly engaged in the production of goods and services (of a non financial nature) for sale in the market place at prices that aim to recover most of the costs involved (e.g. water and port authorities). In general, PNFCs are legally distinguishable from the governments which own them.

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 operating 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.

Appendices

Disclosure and Outputs

1. Disclosure Index

The Mallee Catchment Management Authority (CMA) annual report is prepared in accordance with all relevant Victorian legislations and pronouncements. This index has been prepared to facilitate identification of the CMA's compliance with statutory disclosure requirements.

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2. Outputs delivered in 2018-19 under each of the Mallee RCS sub-strategies

Table 46 | Outputs delivered in 2018-19 under each of the Mallee RCS sub-strategies.

Output Title	Measure	Biodiversity Strategy (TBD)	Mallee Floodplain Management Strategy	Regional Landcare Support Strategy	Mallee Dryland Sustainable Agriculture Strategy	Mallee Waterway Strategy	Land and Water Management Plan	Not Applicable	Grand Total
1.01 Channel	Km					3			3
1.04 Irrigation infrastructure	No. Sites						17		17
	Ha.						764		764
1.05 Waterway structure	No.					1			1
1.06 Terrestrial structure	No.					3			3
1.07 Terrestrial feature	No.					3			3
1.08 Monitoring structure	No.				1	17	1		19
1.09 Fence	No. Sites	7				15			22
	Km.	26				39			65
1.10 Visitor facility	No.					25			25
1.11 Road	No. Sites					28			28
	Km.					37			37
1.12 Crossing	No.					3			3
2.01 Vegetation	No. Sites	9				4			13
	Ha.	464				100			564
2.02 Weed control	No. Sites	74		3		19			96
	Ha.	122,676		1,088		3,310			127,074
2.03 Pest animal control	No. Sites	109		4		23			136
	Ha.	325,340		1,967		8,642			335,950
2.08 Earth works	No. Sites								
3.02 Agricultural practices	No. Sites								
	Ha.								
3.03 Water	No.					48			48
	Ha.					559			559
4.01 Approval and advice	No.	14	89			76	202	3	384
4.02 Management agreement	No.	43				48	66		157
	Ha.	62,007				9,399	1,992		73,399
4.03 Assessment	No.	194	2	1		369	49	15	630
4.04 Engagement event	No. Events	109	24	7	44	301	61	35	581
	No. Participants	826	229	29	1,020	4,006	1,080	505	7,695
4.05 Partnership	No.	27	11		17	75	28	17	175
4.06 Plan	No.	18	2			81	16		117
4.07 Publication	No.	79	3	1	73	271	57	84	568
4.08 Information management system	No.		2			1	2	12	17

Notes

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Notes

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