



East Gippsland

STRATEGIC DIRECTIONS STATEMENT

2022



Integrated Water
Management Forums



Environment,
Land, Water
and Planning

ACKNOWLEDGEMENTS

The East Gippsland Integrated Water Management (IWM) Forum covers the lands and waters of the Gunaikurnai, Bidwell and Ngarigo Monero peoples, whose ancestors and their descendants are the Traditional Owners of this Country.

The forum proudly acknowledges Victoria's Aboriginal communities and their rich culture and pays its respects to their Elders past and present. The forum also recognises the intrinsic connection of Traditional Owners to Country and acknowledges their contribution to the management of land, water and resources. We acknowledge Aboriginal people as Australia's first people and as the Traditional Owners and custodians of the land and water on which we rely. We recognise and value the ongoing contribution of First Nations people and communities to Victorian life and how this enriches us all. We embrace the spirit of reconciliation, working towards equality of outcomes and ensuring an equal voice for all.

This Strategic Directions Statement has been developed by the forum, which includes the following organisations:



The forum will continue to work with other organisations along the IWM journey.

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Cover photo: Mitchell River. Courtesy Gunaikurnai Land and Waters Aboriginal Corporation

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Cyclist on the East Gippsland Rail Trail. Courtesy Destination Gippsland



Bec Hemming – In-coming Chair of the East Gippsland IWM Forum

FOREWORD

On behalf of the East Gippsland Integrated Water Management (IWM) Forum members, I am pleased to present the second East Gippsland IWM Strategic Directions Statement (SDS). The East Gippsland IWM forum was established in 2017. The forum was established to identify and implement IWM projects in the region. The SDS has been prepared by the Department of Environment, Land, Water, and Planning and East Gippsland Water, in collaboration with Traditional Owners and our regional partners.

The past five years have been some of the most challenging times experienced by our environment and communities across the region. We experienced one of the worst droughts recorded, followed by landscape scale bushfires that burnt more than half the region. The impact of this was compounded by the effects of the coronavirus pandemic, and more recently we have seen large rain events and continuous flooding across the region.

East Gippsland is a unique and beautiful region, with a spectacular environment that has everything from mountains, forests, waterways, floodplains, beaches and the iconic Gippsland Lakes. The region is a popular tourist and holiday destination and provides a great lifestyle for those lucky enough to live in this part of Victoria.

We know that the liveability of our regional towns and cities and the health of our environment and economy depend on water. Traditional Owners have long known that water is essential to life and water continues to hold significant cultural and spiritual value. Water is also the lifeblood that supports tourism and recreation, as well as agriculture, horticulture, grazing, forestry, commercial and recreational fisheries, manufacturing and food processing, and residential development to accommodate a growing population.

East Gippsland's natural environment and unique waterways need to be protected for future generations, which requires our commitment and a collaborative approach from us all. The East Gippsland Integrated Water Management Forum plays a crucial role in driving a collaborative and integrated approach to water management to adapt to change and maximise value across the whole water cycle. IWM allows us to optimise the environmental, cultural, social and economic outcomes for our communities.

Our recent experiences and the need to accommodate current and future economic and population growth have highlighted climate change adaptation, community resilience and supporting the initiatives of Traditional Owners as priorities. We have worked together to develop IWM opportunities for the region, which fall under the themes:

- water for Traditional Owners
- improving water management in our townships
- improving waterway health.

I am proud to present the updated SDS for the East Gippsland IWM Forum. I am pleased to welcome Bec Hemming as the new Chair of the East Gippsland IWM Forum. Bec has been instrumental in driving IWM in East Gippsland and strong relationships across the region. I know that I am leaving the Forum in very capable hands.

I would like to acknowledge the outstanding commitment and contribution of the East Gippsland forum partners who have demonstrated true collaboration to develop and deliver on IWM initiatives as well providing the strategic direction for the next few years. We know the challenges that we face in East Gippsland but we also have the benefits of past experiences and established relationships. I know that together, we can make decisions today that we will celebrate in the future.

Steve McKenzie

Out-going Chair of the East Gippsland IWM Forum

EXECUTIVE SUMMARY

The *Integrated Water Management Framework for Victoria* (2017) is designed to help water managers and stakeholders work together to improve how the water cycle contributes to the liveability of towns and cities in Victoria, with communities at the centre of decision making.

The East Gippsland Integrated Water Management Forum is one of 10 regional integrated water management (IWM) forums across Victoria that are realising the local implementation of the framework

Vision

Innovative and collaborative water management to maximise the resilience, liveability and economic prosperity of East Gippsland communities, the connected waterways and wetlands, and the Gippsland Lakes.

Progress to date

The 2018 East Gippsland IWM Forum Strategic Directions Statement (SDS) articulated the collaborative intent and shared agreement of all stakeholders involved in the forum and identified 10 projects which reflected the forum's initial priorities and opportunities. Many of these projects are underway or have been completed, including the IWM Plan for Bairnsdale, which is serving as a template for the Lakes Entrance IWM Plan, and the Supporting Aboriginal Water Values in East Gippsland project, which is informing Traditional Owner acknowledgement, respect, and inclusion in developing IWM projects in both the East Gippsland and neighbouring Gippsland IWM forums.

Sunrise over Omeo by Anne Morley. Courtesy Destination Gippsland

This 2022 update provides a progress report on the forum's activity, its changing priorities, and future opportunities. It describes the water security challenges and opportunities of the region, sets a strategic direction for the next few years, and outlines the 'best endeavours' or ways in which IWM is and will be applied through projects proposed, in progress or completed for the region.

Key areas

The forum's experience since establishment has highlighted the need to address the following key areas:

- Traditional Owners are taking an increasingly active and leading role in water management. Their needs, impacts and opportunities should be acknowledged, respected, and enhanced in all IWM projects
- climate change adaptation is a priority, especially preparing for future impacts and extreme events
- sustainable population growth requires water-sensitive planning, building and rebuilding. Growth in a water-constrained future requires a more diverse range of water sources and better use of existing resources
- East Gippsland's natural environment and unique waterways need to be maintained and improved for future generations.

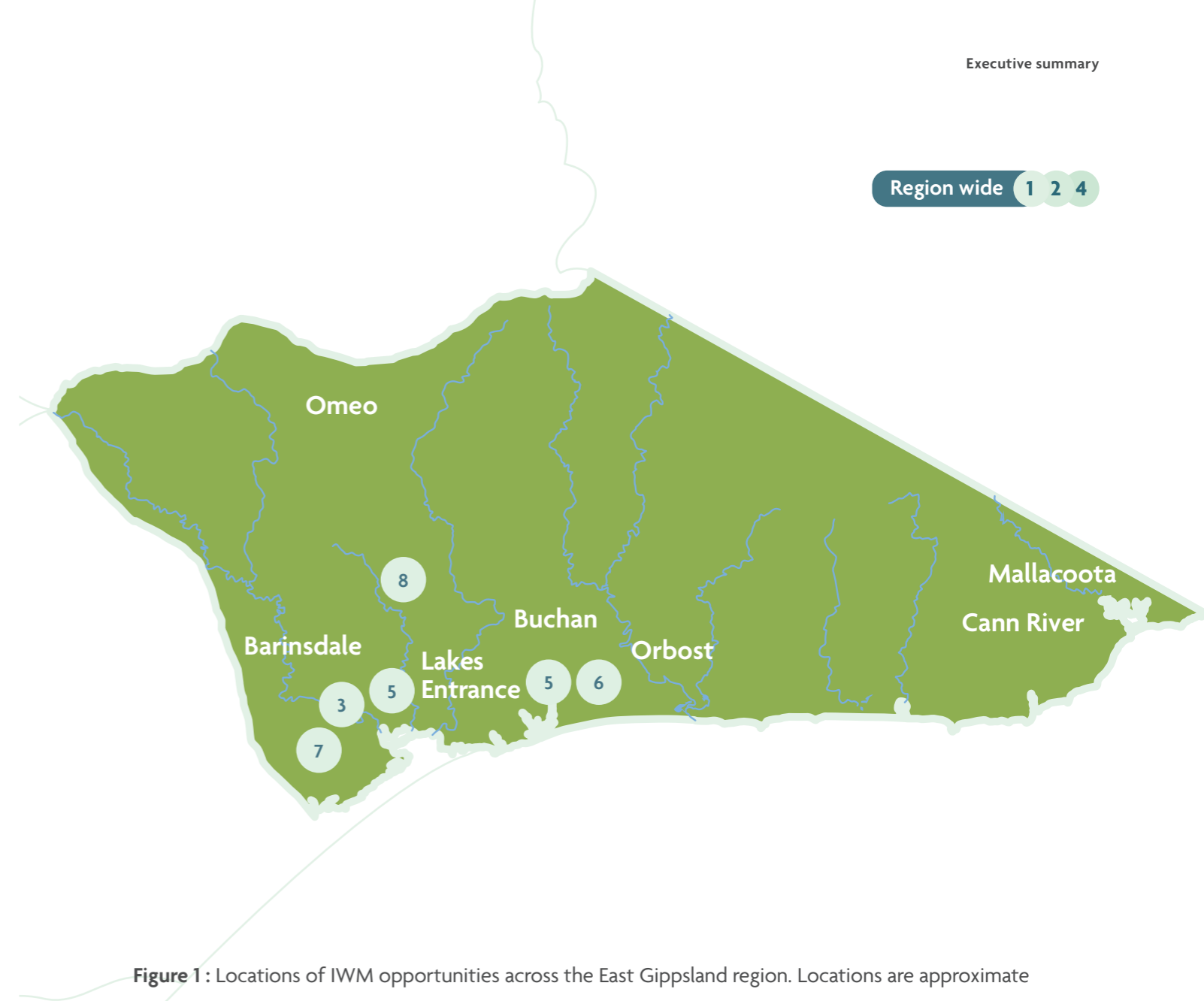


Figure 1 : Locations of IWM opportunities across the East Gippsland region. Locations are approximate

Themes and IWM opportunities

Eight priority IWM opportunities have been identified in the region, and these have been grouped into three themes that respond to the key challenges outlined above:

Water for Traditional Owners

1. Supporting Aboriginal Water Values in East Gippsland

Improving water management in our townships

2. Supporting Communities to Achieve Their Objectives Around Water
3. Bairnsdale IWM Plan Implementation
4. Stormwater Management Plan
5. Recycled Water Treatment and Network Plan (Bairnsdale and Lakes Entrance)

Improving waterway health

6. Lakes Entrance IWM Plan
7. Croke Street Wetlands and Stormwater Management
8. Improving the Health of Waterways Flowing into the Gippsland Lakes including the Tambo, Nicholson, and Mitchell Rivers

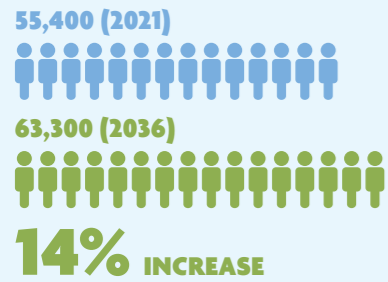
East Gippsland Integrated Water Management Forum Strategic Directions Statement 2022 summary

We work collaboratively with partners across the water cycle to find new ways to share resources and conserve water for multiple community and environmental benefits.

We work to meet the water needs of a changing region.

In 2016, the East Gippsland local government area had a population of 48,376 people (East Gippsland Shire Council). The projected population changes are:

POPULATION GROWTH



CHANGE IN RAINFALL BY 2040
DECREASE BY 12.3%
WITH MORE INTENSE RAINFALL (UP TO 7.6% INCREASE) IN SOME YEARS



TEMPERATURE
AN INCREASE OF 0.7-1.7°C
IN EAST GIPPSLAND BY 2040*

* Population data: Victoria In Future 2019
* Temperature and rainfall are the highest and lowest predictions across the region's catchments. Predictions represent the annual average at 2040 relative to the year 1995. Source: Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria, November 2020.

IWM opportunities

- Supporting Aboriginal Water Values in East Gippsland**
Support for and acknowledgement and enhancement of Aboriginal values around water.
- Supporting Communities to Achieve Their Objectives Around Water**
Building community resilience by bringing IWM planning and opportunities into drought, fire and flood recovery and prevention.
- Bairnsdale IWM Plan Implementation**
Funding, further developing and implementing priority projects identified in the plan.
- Stormwater Management Plan**
Drawing on the Bairnsdale IWM Plan work to create a plan to improve stormwater management in towns including Paynesville, Lakes Entrance, Tambo Bluff, Marlo and Eagle Point.
- Recycled Water Treatment and Network Plan (Bairnsdale and Lakes Entrance)**
Exploring ways to realise the potential of recycled water from the region's two largest wastewater treatment plants.
- Lakes Entrance IWM Plan**
Incorporating IWM principles into the Lakes Entrance Growth and Adaptation Strategy and an IWM plan for Lakes Entrance.
- Crooke Street Wetlands**
Protecting water quality in Gippsland Lakes by filtering urban stormwater through new wetlands.
- Improving the Health of Waterways Flowing into the Gippsland Lakes and the Tambo, Nicholson, and Mitchell Rivers**
Fencing and revegetation to improve water quality, bank stability and the quality of riparian vegetation along key waterways in farmlands.



BETTER TOGETHER: INTEGRATING WATER MANAGEMENT IN VICTORIA

Water and Traditional Owners

East Gippsland is part of the tapestry of interwoven cultural landscapes that are the product of the skills, knowledge and activities of Traditional Owners caring for Country over thousands of generations. Cultural landscapes are reflections of how Traditional Owners engage with the world. Traditional Owners have an intrinsic connection to Country in East Gippsland.

The Aboriginal community across the East Gippsland region is represented by the Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC) (the Registered Aboriginal Party and Gunaikurnai Native Title holder), the Bidwell people, and the Ngarigo Monero people.

'As Gunaikurnai, we see our land (Wurruk), waters (Yarnda), air (Watpootjan) and every living thing as one. All things come from Wurruk, Yarnda and Watpootjan and they are the spiritual lifegiving resources, providing us with resources and forming the basis of our cultural practices. We have a cultural responsibility to ensure that all of it is looked after.'— *Gunaikurnai Whole of Country Plan (2015)*.

'Bidwell's aspirations are to preserve, protect, and showcase cultural heritage, lore, traditions, and customs through self-determination. We assert our rights to a healthy country and an environmentally friendly landscape, riverscape and seascape. All living things in biodiversity have an absolute right to live in peace and harmony on this great country we all share and live on. Bidwell is committed to creating positive relationships with non-government and government organisations; and is interested in developing strategies for coastal waters, rivers and lakes.'— Bidwell First Nations Clans.

'We are the Ngarigo Monero people, 'our people have always been connected to the coastline as well as the mountains'. Our special places are connected to our knowledge and stories and in caring for country. Our rivers were our pathways for our Old People to connect to special places. Our oral stories shared down the generations are rich in their knowledge.'— Ngarigo Monero people.

European settlement in Victoria saw massacres of Indigenous people, and the surviving Traditional Owners displaced from their Country and culture.

Water in the new millennium

Victoria's regional towns and cities grew with the provision of urban drinking water and sanitation services. Irrigated agriculture

and dryland farming have both played important roles in Victoria's history and growth. Today, Victoria is the nation's largest food and fibre exporter.¹

Water management is operating in an increasingly challenging context. We have lived through the Millennium Drought and experienced flooding, bushfires and extreme weather. We have seen the consequences of the overuse and the overallocation of water in one area affecting the availability or quality of water in another. Significant investment and interventions have been required to begin returning the flow of water to our rivers and floodplains, yet more remains to be done.

Water managers are now operating in an increasingly complex and uncertain environment. The drivers of change are both social and environmental. They include climate change, population growth, shifting migration patterns associated with the coronavirus pandemic, economic challenges, and policy changes. But our beautiful region remains a wonderful place to live, and we continue to see our population increase. The liveability of our regional towns and cities and the health of our environment and economy depend on the availability of water. Traditional Owners know that water is essential to life, and to Creation, and that waterways are living entities. The cultural, spiritual, physical, and economic health of the Aboriginal people cannot be separated from the health of their Country, including the water and waterways. Therefore, we need an integrated and collaborative approach to adapt to change and maximise value across the whole water cycle.

What is integrated water management?

How can it help address the challenges?

We have the challenges of population growth, climate change and natural disasters, but we also have the benefits of past experiences and established relationships. Together, we can make decisions today that we will celebrate in the future.

● ● Integrated water management considers all parts of the water cycle as an integrated system to optimise the environmental, cultural, social and economic outcomes for our communities.



While everyone has a responsibility to conserve and protect water, there are several key groups charged with making decisions about water within each region. They include:

- Traditional Owner groups, who have a deep knowledge of and connection to the region's waterways, to other water resources and to Country
- urban and rural water corporations, which manage water storage, access, licences and supply, and wastewater services
- local governments, which manage surface water drainage, protect local waters from degradation and pollution, oversee onsite domestic wastewater planning, regulate local development, and undertake strategic planning for future growth
- catchment management authorities, which plan for flood management, issue approvals for works involving waterways, and work with landholders to consider the interactions of land, water and biodiversity, and who contribute to whole of catchment health and monitoring.

The decisions these groups make individually, can have significant impacts on the quality and availability of the water for others in the catchment and further downstream. So, it makes sense they collaborate towards common goals to maximise water saving and reuse and share the benefits (Figure 2).

IWM is an approach that can be applied at multiple scales from water planning at the local park, right up to the whole of catchment. IWM can connect climate-change adaptation, planning and open space, water security and other strategies, so that collaborators can add value to each other's projects.

In East Gippsland, IWM has already played a powerful role in supporting community resilience as collaborators successfully worked together on recovery projects following natural disasters.

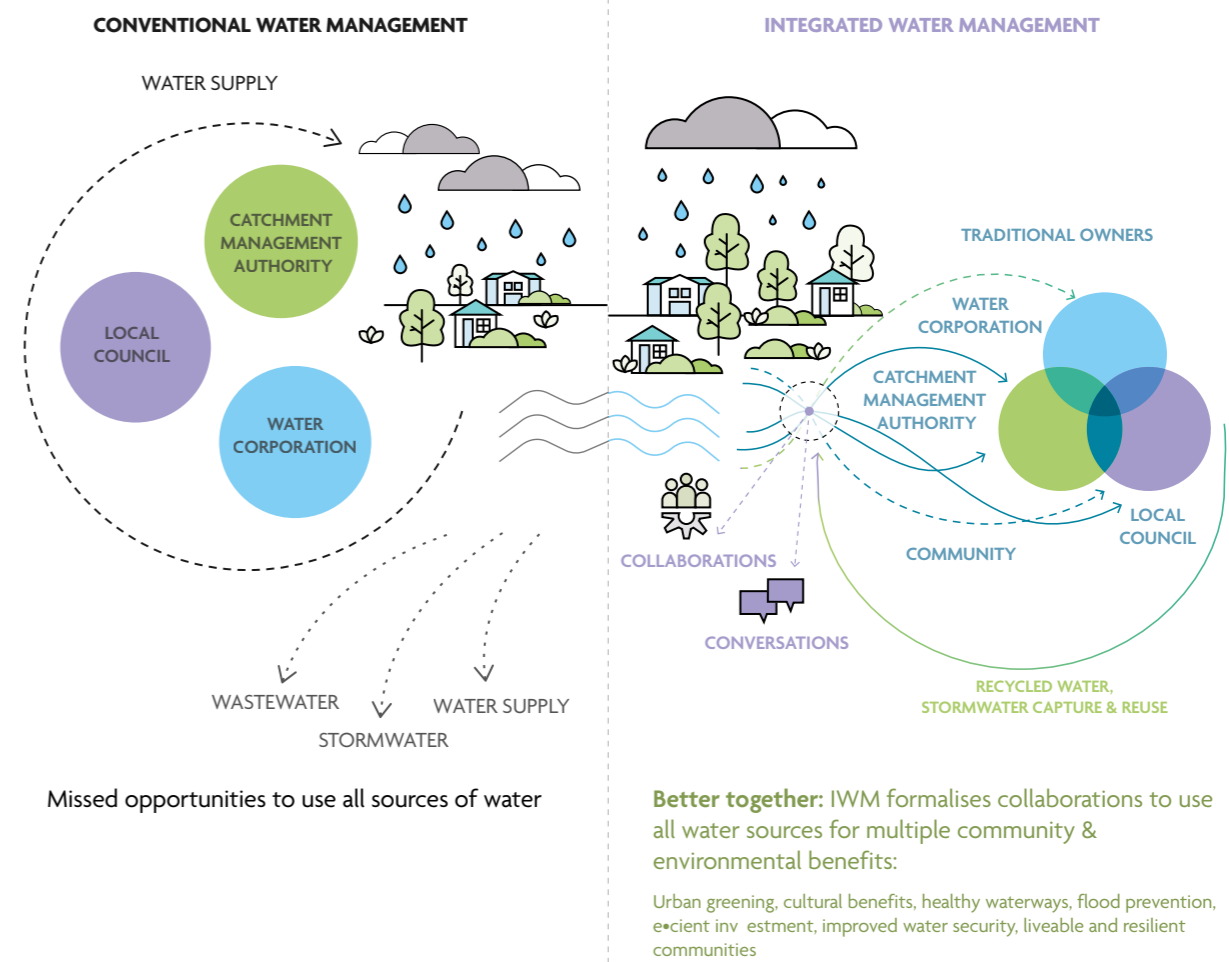


Figure 2 : How does IWM work? Conventional water management saw a more siloed approach to water management, with a single supply source and two discharge systems to move stormwater and wastewater away as quickly as possible, resulting in missed opportunities to use all sources of water. The IWM approach brings water managers together to plan and deliver new opportunities to provide broader benefits to the community. Listening to and consulting with Victorian communities about how they want water managed is critical to informing IWM decision making. Communities are directly consulted on IWM plans and through existing catchment management authority, water corporation and local government strategies.

¹ Victorian Food and Fibre Export Performance Report 2019-20

How are we delivering IWM?

To facilitate IWM across Victoria, the Victorian Department of Environment Land Water and Planning (DELWP) supported the establishment of 10 IWM forums in regional Victoria (Figure 3), in addition to five metropolitan IWM forums in Greater Melbourne. Like the East Gippsland IWM Forum, all forums bring together leaders of local water-sector organisations to explore, prioritise and oversee the development of local IWM opportunities.

Being collaborative, IWM builds on existing partnerships and planning processes, and aims to break down silos between

independently operating, water decision-makers – encouraging forum members to consider the water cycle of their own service delivery, and its interdependencies or overlaps with other members (Figure 2). Forum members consider waters in rivers, streams and bays, wastewater, drinking water, stormwater, and water treatment processes.

While collaboration can take more time and effort than planning for just one water service in isolation, working together achieves better outcomes for the environment, society, and economy by finding mutually beneficial ways to share water, assets and costs.



Figure 3 : IWM forum regions of Victoria, which are based around water corporation boundaries

Strategic outcomes

The *Integrated Water Management Framework for Victoria* (2017) proposed several strategic water-related outcomes that will deliver on the vision in the state water plan, *Water for Victoria* (2016), to ‘build resilient and liveable cities and towns’. These strategic outcomes provide a way to identify the multiple economic, social, and environmental benefits that can come from a single initiative. The original framework included five such strategic outcomes that have since been expanded to seven.

Each Traditional Owner group has the right to self-determination. GLaWAC has self-determined to include an eighth strategic outcome in the 2022 East Gippsland and Gippsland IWM Forum SDSs. It is focused on Traditional Owner inclusion and values.

The identification of strategic outcomes will continue to evolve as the water management context changes and the sector innovates. Proposed project opportunities are assessed and prioritised against how well and how many of these strategic outcomes they meet.

The strategic outcomes are:

-  **Safe, secure and affordable supplies in a changing future** – indicated by the amount of water conserved or alternative water volume supplied to meet an identified demand..
-  **Effective and affordable wastewater systems** – ensuring environmental and public health standards are met, while maximising resource recovery.
-  **Managed flood risks** – resilience to existing and future flood risks.
-  **Healthy and valued waterways and waterbodies** – indicated by the ecological health of riparian areas, hydrology and water quality.
-  **Healthy and valued landscapes** – maximising the connectivity, accessibility, greening and vegetation, cooling, aesthetic and recreational values of landscapes.
-  **Traditional Owner values, opportunities, and inclusion** – ensuring Traditional Owner values and priorities for water are acknowledged, respected and enhanced, and as well as supporting Traditional Owner leadership, participation and employment in water management.
-  **Community values reflected in place-based planning** – ensuring that different communities are considered and included in planning and design, and provided with water-systems literacy to enable their involvement.
-  **Jobs, economic opportunity and innovation** – recognising that water management is an integral part of economic growth.

To find out more about how Victoria is applying IWM in *Integrated Water Management Framework for Victoria* (2017), visit: www.water.vic.gov.au

Strategic Directions Statement – how IWM is happening in the region

This SDS articulates the collaborative intent and shared agreement of all stakeholders involved in the forum. It describes the water security challenges and opportunities in the region, sets the strategic direction for the next few years, and outlines the ‘best endeavours’ or ways in which IWM is and will be applied through opportunities that are proposed, in-progress or completed in the region.

This is the first update to the East Gippsland IWM SDS produced in 2018, and includes:

- a progress report on the forum’s activity and its changing priorities
- case studies illustrating IWM in the region
- details of planned and potential opportunities designed to meet the key themes and challenges over the next three to five years.

Significantly, at the time of writing this document, the Central and Gippsland Region Sustainable Water Strategy (SWS) and East Gippsland Water’s 2022 Urban Water Strategy were recently published and East Gippsland Water’s 2023-2028 price submission are in development or is being finalised. These all contain recommendations related to IWM, some of which will be articulated, delivered and reported on separately to the IWM forum. For example, the Central and Gippsland Region SWS proposes includes an action to embed IWM objectives in major urban developments and to include IWM criteria in planning guidance and land-use decisions, and while the urban water strategy proposes to pursue small and large-scale IWM initiatives to reduce drinking water demand.

This SDS has been developed to complement them and other plans and strategies that apply to the region relating to water, climate change, the rights of First Nations peoples and catchment management (Figure 4).

Paddleboarding at Lakes Entrance. Courtesy Destination Gippsland



Figure 4 : The SDS and related water policies, strategies and plans of the region.



Water for Victoria

State government strategic plan for management of Victoria's water resources, now and into the future.

Integrated Water Management Framework for Victoria

Whole-of-catchment water planning and management to maintain and enhance the liveability, prosperity and resilience of Victoria's cities and towns. Applied through the five metropolitan and 10 regional IWM forums.

2022 East Gippsland IWM Forum SDS

A revised statement of agreement between Forum members of urban and peri-urban IWM priorities and collaborative projects.

Relevant plans and Strategies in place in the region



East Gippsland Water Urban Water Strategy
A detailed 50-year forecast of water demands for local communities, along with supply options to meet these demands.



Caring for Country Plans: Gunaikurnai Whole of Country Plan
Guiding and promoting the awareness, investment and rights of Aboriginal people and culture, working together now and for future benefits.



Gunaikurnai and Victorian Government Joint Management Plan
Setting strategic direction for the joint management partnership between the Gunaikurnai people and the State Government, enabling the knowledge and culture of the Gunaikurnai to influence, and be recognised in the management of the ten jointly managed parks and reserves.



Central and Gippsland Region Sustainable Water Strategy
Long-term plans and statutory processes for state-wide water resource planning to secure the water future of Victoria's regions.



East Gippsland Regional Catchment Strategy
Guides actions to improve and protect the catchment's natural resources (water, land, biodiversity). Looking after these precious natural resources underpins the social, cultural and economic wellbeing of the diverse communities that make up the East Gippsland Catchment.



Gippsland Regional Climate Change Adaptation Strategy
Five-year practical strategy developed by the community to address the unique challenges and opportunities that climate change brings to the region, and guide local action.



Local government plans and strategies
Various strategies, plans, guidelines and other documents that have connections to the water cycle. Examples include open space plans, local climate change adaptation strategies, and natural disaster management plans.

WATER IN THE EAST GIPPSLAND REGION

The East Gippsland IWM Forum region covers an area of about 21,000 square kilometres stretching from Lindenow in the west through the region's main business centre, Bairnsdale, and Buchan in the heart of Snowy River country, to the holiday centres of Paynesville, Metung, Orbost, Cann River, Lakes Entrance and Mallacoota in the east together with the alpine resort of Dinner Plain and Omeo, in the highlands. It is home to 55,000 people² and includes the traditional lands and waters of the Gunaikurnai, Bidwell and Ngarigo Monero peoples, for whom water has a fundamental and intrinsic cultural and spiritual value.

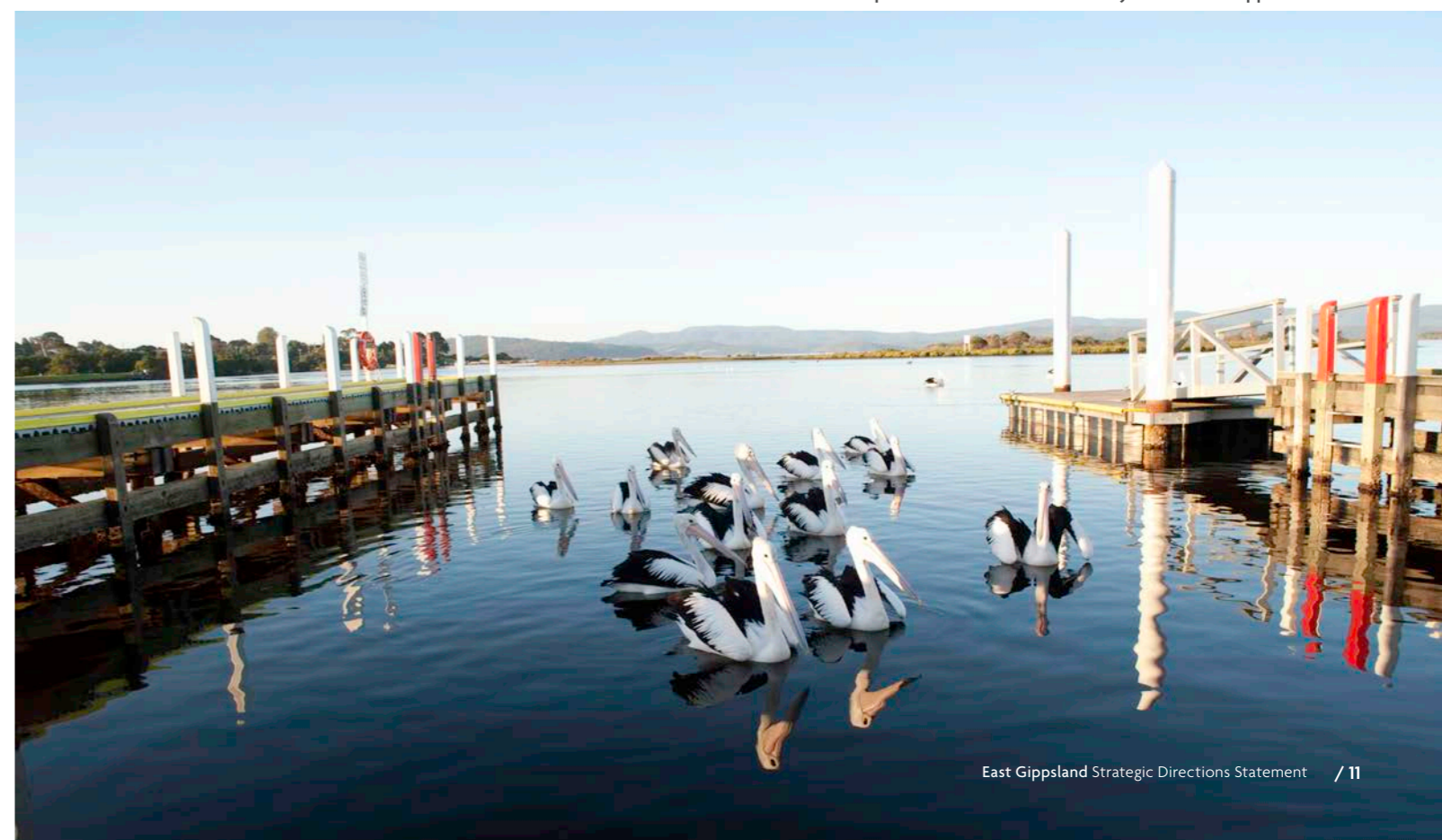
These lands include spectacular mountains, floodplains, forests, lakes and beaches. More than 80 per cent of the land in East Gippsland is publicly owned and vested in state forests, national and coastal parks and marine national parks. Intact habitats support many different plants and animals, with records of over 5,000 species. This includes at least 35 species of plant that are unique to the region. The Gippsland Lakes Ramsar site is an important drought refuge for waterbirds. Other local wildlife includes wombats, lace monitors, superb lyrebirds, Gippsland water dragons, and other keystone and iconic species. Tourists and day-trippers come year-round to visit these destinations and enjoy hiking, sailing, fishing, birdwatching, and visiting picturesque towns.

² Victoria in Future 2019

Water in the region is an important economic enabler, supporting these tourism and recreation destinations, as well as agriculture, horticulture, grazing, forestry, commercial and recreational fisheries, manufacturing and food processing, and residential development to accommodate a growing population. Sediment from flooding makes the soil of the Mitchell River flats rich and fertile, for example, supporting several productive vegetable-growing agribusinesses.

The health and liveability of the thriving region is underpinned by water, from the provision of safe drinking water and the management of stormwater and wastewater in urban areas, to the rivers, rainfall and other environmental flows that support culture, ecosystems, landscapes and wildlife.

Flock of pelicans at Mallacoota. Courtesy Destination Gippsland



A CHANGING REGION

The East Gippsland IWM Forum has been operating for nearly five years. It has experience on which to draw and projects upon which to build.

There have also been major disruptions, such as the coronavirus pandemic and natural disasters, including a drought in 2019 that resulted in the lowest stream flows on record, the Black Summer bushfires in 2019-20 that burnt more than one million hectares or 56 per cent of East Gippsland's forested areas, and several flood events during 2021 and 2022.

In March 2021, the Victorian Government issued a licence to GLaWAC to take and use an allocation of two gigalitres of Mitchell River winterfill water on behalf of the Gunaikurnai people for economic, cultural, and other uses. In addition, the Aboriginal Access to Water Roadmap is currently being developed with Traditional Owners as part of the Victorian Government's Aboriginal Water Program. The roadmap aims to identify access to water for economic development as well as for social, cultural, and spiritual outcomes. Forum members recognise the cultural and spiritual value of water to Traditional Owners and their self-determination and involvement in IWM.

These past experiences and the need to accommodate current and future economic and population growth have highlighted climate change adaptation, community resilience and supporting

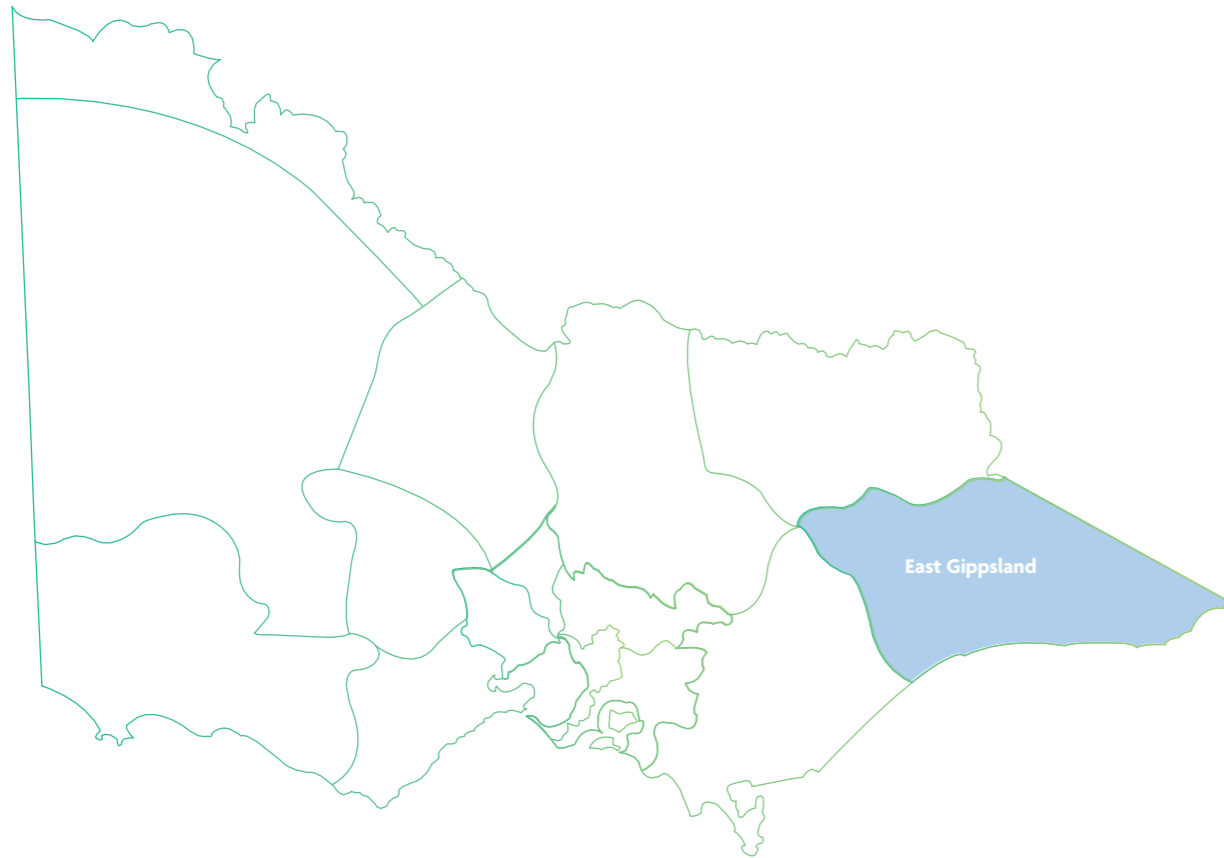
the initiatives of First Nations people as priorities for the forum. As such, the forum's work over the next few years focuses on key themes.

Water for Traditional Owners

Traditional Owners are taking an increasingly active and leading role in water management

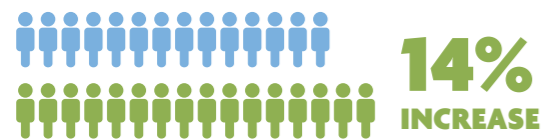
There is growing recognition of the right to self-determination of Traditional Owners and First Nations peoples, and their inherent obligations to speak continually for and look after the Country of their ancestors for current and future generations. Traditional Owners in the East Gippsland region are increasingly active in leading, planning, delivering, and reporting on projects on Country. Forum members will play various roles in supporting Traditional Owner group initiatives, such as those that flow from the GLaWAC water allocation.

The project focused on the Water for Traditional Owners theme is: Supporting Aboriginal Water Values in East Gippsland.



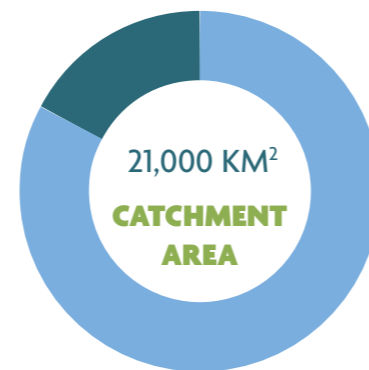
POPULATION GROWTH

55,400 (2021)
63,300 (2036)



THE REGION

- PUBLIC LAND 83%
- PRIVATE LAND 12%



CHANGE IN RAINFALL BY 2040

DECREASE BY 12.3%
WITH MORE INTENSE RAINFALL
(UP TO 7.6% INCREASE) IN SOME YEARS



TEMPERATURE

AN INCREASE OF
0.7-1.7°C
IN EAST GIPPSLAND
BY 2040*

WATERWAY CONDITION

EXCELLENT:	53%
GOOD:	27%
MODERATE:	17%
POOR:	2%
VERY POOR:	0.4%



Snowy River at Orbost by Nicky Cawood. Courtesy Destination Gippsland



*Population data: Victoria In Future 2019
*Waterway condition: Third Index of Stream Condition report - ISC East Gippsland region. Rates each section of major rivers according to a defined set of rules.
*Temperature and rainfall are the highest and lowest predictions across the catchments. Predictions represent the annual average at 2040 relative to the year 1995. Source: Guidelines for Assessing the Impact of Climate Change on Water Availability in Victoria, November 2020.

Improving water management in our townships

Sustainable population growth and climate change adaptation are priorities. This requires water-sensitive planning, building and rebuilding, and preparation for future natural disasters and extreme events. Growth in a water-constrained future requires more diverse water sources and better use of existing resources.

East Gippsland is already experiencing the consequences of climate change. Mallacoota's residents and visitors woke up on New Year's Eve 2019 to the fact they were surrounded by fire. Photographs of thousands of people huddled on the foreshore under red skies made news around the world. Mallacoota was one of many communities across the region severely affected by the bushfires.

2019 was the region's driest year on record and followed three years of drought. This recent and visceral experience of bushfires has heightened awareness of the need for water security for firefighting, especially during prolonged drought. In addition to increased fire risk, the region is predicted to experience more frequent and intense extreme weather events, including storms, high winds, broad regional flooding, and localised flash flooding. 2021 was the wettest year on record for Bairnsdale. Other impacts of these extremes include algal blooms, fish kills, coastal and waterway erosion, and disruption to industry. The trend generally is for hotter, drier conditions and more frequent extreme events. This is 'the new normal'.

These challenges and approaches to addressing them are part of the East Gippsland Regional Catchment Strategy, the Central and Gippsland Region SWS, and local government climate change adaptation plans. IWM will assist in monitoring and adapting to climate change as a shared responsibility.

Victoria in Future (2019) predicted an average regional population growth of one and a half per cent annually from 2018 to 2036.

The first two years of this period saw growth exceed these expectations. More recently, the coronavirus pandemic saw a substantial increase in the number of people migrating from Melbourne to Victoria's regional areas and closed international borders have resulted in a domestic tourism boom.

Visitors and permanent residents alike need drinking water supplies and wastewater management, and water-supported community assets, such as parks and gardens. New growth areas and several fire-impacted small communities present an opportunity to build or rebuild precincts that are greener, more water-efficient, resilient, and liveable.

There is an opportunity to make better use of water resources and the water cycle, considering both water quality and quantity, and to direct water that's fit-for-purpose to where it's needed. This involves exploring opportunities to recharge aquifers or substitute potable water with captured stormwater or treated recycled water where drinking quality is not required. It also involves seeing discharges and wastewater as an opportunity to increase water in the environment and improve liveability, rather than a problem to solve.

Projects focused on improving water management in our townships include:

- Supporting Communities to Achieve Their Objectives Around Water
- Bairnsdale IWM Plan Implementation
- Stormwater Management Plan
- Recycled Water Management Plan (Bairnsdale and Lakes Entrance).

Improving waterway health

East Gippsland's natural environment and unique waterways need to be protected for future generations.

East Gippsland's lakes, waterways, coasts, and surrounding catchments - which include nine national parks and 300 reserves managed by Parks Victoria - are part of the unique character of the region. They are vitally important to the natural environment and wildlife of the region and the local tourism sector, which supports jobs and economic growth. Managing the flows into Ramsar listed wetlands—sites designated as internationally important for conserving biological diversity—is a particularly high priority.

While flooding is an important part of the natural function of some ecosystems, extreme storms and rainfall pose problems. For example, severe storms increase the debris load in waterways, affecting water quality and nutrient load, and some coastal ecosystems can experience too much freshwater, affecting the delicate balance needed by sensitive plants, dolphins, and other species in those environments. There is an opportunity to manage the risks of flooding and drainage in an innovative way, and a need to repair degraded environments and to heal Country.

Projects focused in improving waterway health include:

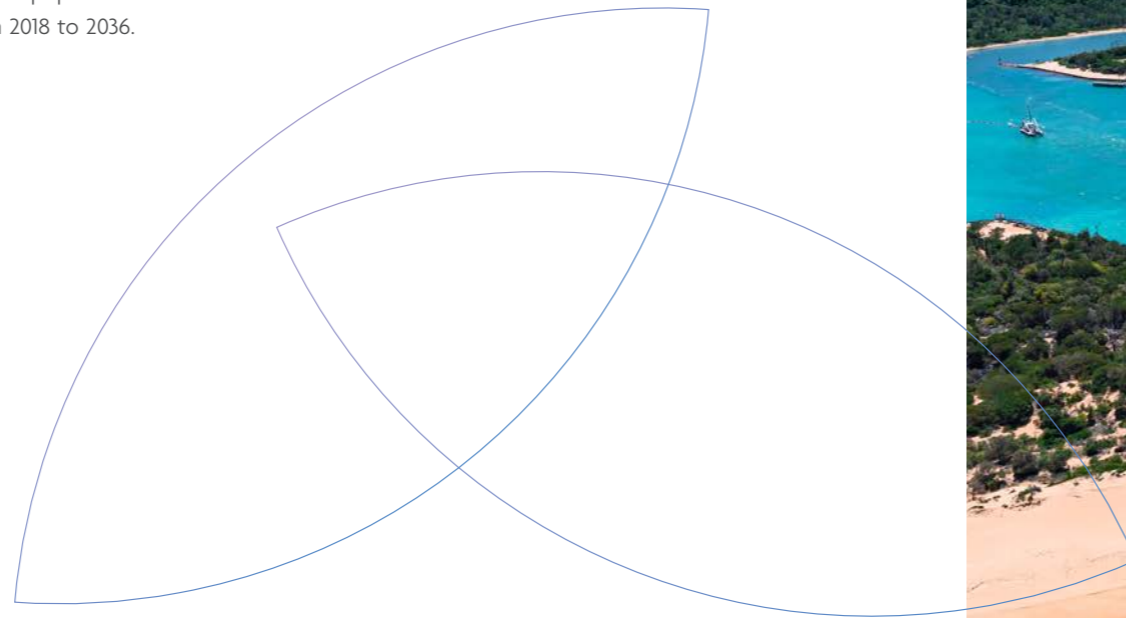
- Lakes Entrance IWM Plan
- Crooke Street Wetlands
- Improving the Health of Waterways Flowing into the Gippsland Lakes and the Tambo, Nicholson, and Mitchell Rivers.

This SDS highlights the key challenges in the region and identifies collaborative IWM opportunities that can address climate change and other key drivers to improve resilience and liveability in cities and towns in the region.

The scope of the East Gippsland IWM Forum is confined to collaborative water management within our regional communities including their peri-urban boundaries. The focus is on the urban water cycle consisting of natural and constructed assets including waterways, groundwater, water supply, sewerage systems and stormwater.

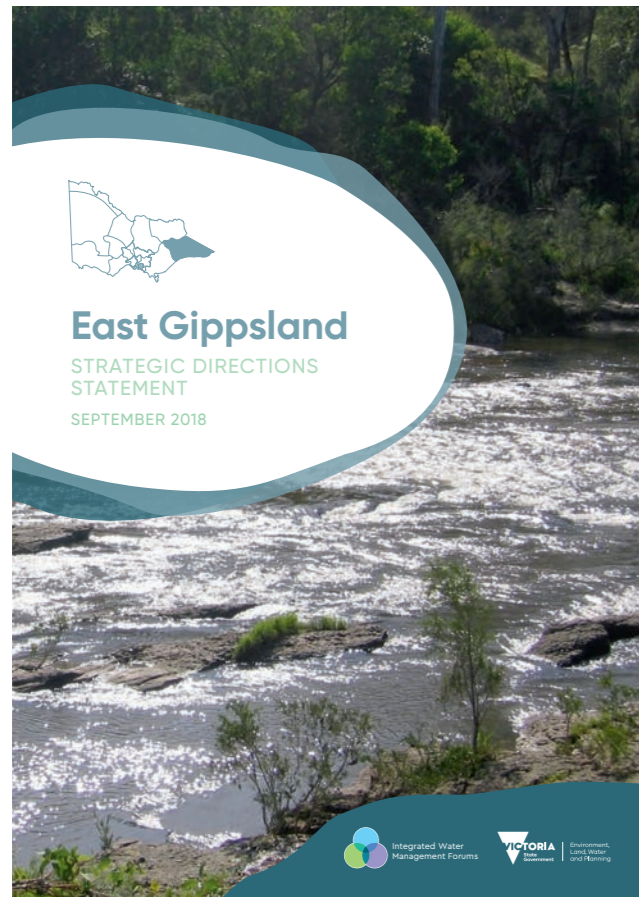
Although the scope includes the impact of urban communities on connected environmental assets such as rivers, wetlands and the Gippsland Lakes, it excludes the management of those assets in their own right. The management of such assets is comprehensively covered by separate processes, such as the Gippsland Lakes Projects managed by the Gippsland Lakes Co-ordinating Committee. The IWM forum, however, will co-ordinate activities with other overlapping processes and management bodies.

Lakes Entrance. Courtesy Destination Gippsland



PROGRESS TO DATE

The first East Gippsland IWM Forum SDS was published in September 2018. It articulated the regional context, shared vision and strategic water-related objectives for the region. It also listed IWM opportunities as ‘ready to advance’ projects developed in collaboration by the forum partners. This SDS can be viewed online at www.water.vic.gov.au



The shared experience of the forum’s work has led to a deeper understanding of IWM and developed and strengthened relationships within the region. These established relationships enabled people to work together quickly to respond to the Black Summer bushfires of 2019-20.

The forum members have IWM at the forefront of their thinking and several are implementing IWM projects independently. The projects – past, current and future – listed in this SDS and endorsed by the forum members are those that benefit from a collaborative, multi-party approach.

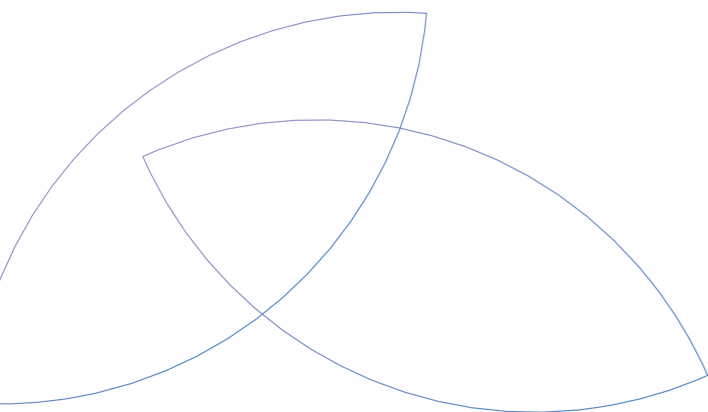
Our first SDS identified 10 projects that reflect the East Gippsland IWM Forum’s initial priorities and opportunities. Many of these projects are underway or have been completed. The ‘Bairnsdale IWM Plan’ project has been completed and is now being implemented. You can read more about this project, “Bairnsdale IWM Plan Implementation” on page 27. Seven projects are underway. In particular, the framework and tools developed as part of the ‘Supporting Aboriginal Water Values in East Gippsland’ project are now informing Traditional Owner considerations in other IWM projects both in the East Gippsland and the Gippsland IWM Forum regions.

The East Gippsland IWM Forum is flexible and responsive to the changing needs and priorities of local governments and other members. Two projects were delayed as forum members dealt with natural disasters, greater than expected population growth and the impacts of the coronavirus pandemic.

Progress on the 2018 SDS projects is summarised in Table 1, with brief notes on their outcomes and how they inform the current and future opportunities detailed in this refreshed SDS.

Table 1: A summary of the status of 2018 SDS IWM opportunities.

IWM opportunity	Status	Notes
Bairnsdale IWM Plan	Complete	Implementation of identified opportunities included in this updated SDS. See page 27 and read case study on page 20.
Bairnsdale Livestock Exchange, Bairnsdale Oval and Magees Gully Water Management	Underway	On track for December 2023 completion. See page 27.
Lakes Entrance IWM Plan	Not yet commenced	Carried forward for inclusion in this updated SDS. See page 29.
Place-Based Planning in East Gippsland	Underway and adaptable	Carried forward with an emphasis on community resilience through ‘Supporting Communities to Achieve Their Objectives Around Water’ opportunities as they arise. See page 26.
Planning Guidelines for Developers and Urban Waterway Managers	Underway	This opportunity is now included as part of Policy 3-4 in the Central and Gippsland Sustainable Water Strategy. This work will continue with the Victorian Government exploring ways to embed IWM criteria in planning guidance material and policies.
Dinner Plain Recycled Water Scheme Investigations	Complete	An options analysis to consider the various options for snowmaking, including recycled water, is complete.
Paynesville Recycled Water	Underway	The drivers for this opportunity have changed. This will continue to be investigated outside the forum as one of many options as part of EGW’s strategic planning.
Maintenance of Community Assets	Underway	Priority community assets are being identified in the wake of recent natural disasters. This work will continue through local IWM plans and the actions of bushfire community recovery committees.
Tambo River Improvement at Swifts Creek Township	Underway	Carried forward as ‘Improving the Health of Waterways Flowing into the Gippsland Lakes and the Tambo, Nicholson, and Mitchell Rivers’. See page 30.
Supporting Aboriginal Water Values in East Gippsland	Underway	GLaWAC is a member of the forum and the practitioners’ group. Carried forward for inclusion in this updated SDS. See page 24.



Mallacoota. Courtesy Destination Gippsland

Case study

Love our lakes

A new wetland and partnership

A dusty paddock outside Bairnsdale has been transformed into a new wetland with 80,000 trees that will help protect the health of the Gippsland Lakes, thanks to a partnership between local business Cranes Asphalt and Bitumen Sealing and the Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC), coordinated by East Gippsland Shire Council.

'This has been a big project for us, employing 15 crew, including our apprentices, and taking over three months,' said GLaWAC Project Manager, Nigel Pearce.

'This project has helped our team reconnect with Country. Our people have lived here thousands of years and we feel like we have a responsibility to care for it. This project is a great example of people working together to make things happen.'



'Cranes is very proud to be in partnership with GLaWAC to deliver a project like this,' said Chris Settle, Cranes' General Manager – Delivery. 'I hope it's just the start of a long-term relationship and we're looking forward to the next project,' he added.



Protecting the Gippsland Lakes

While the new partnership has provided employment and community benefits, the wetland itself also will capture stormwater redirected from the local urban area.

'This wetland will help filter water and protect the internationally significant Jones Bay wetlands,' said program coordinator Sean Phillipson from the Gippsland Lakes Coordinating Committee (GLCC), the organisation tasked with making funding recommendations to Victoria's Minister for Water for the Gippsland Lakes Community Grants Program.

Sean explained the importance of the project in helping address urban and industrial water quality impacts in Bairnsdale's east. 'The filtering effect of plants is a major contributor to cleaner water entering the larger waterways,' Sean said.

A space for nature

As well as helping to protect the Ramsar listed Gippsland Lakes, the new wetland is expected to become, in time, a haven for important plants and animals.

'The area has been planted out with native vegetation,' explained Sean. 'Meaning it will also be attractive to native frogs, bugs, birds and other critters.'

Other wetlands established on private property as part of the GLCC program have seen the return of endangered frogs and significant bird species.

This project was funded by the Victorian State Government. For more about projects funded through GLCC, go to www.loveourlakes.net.au



Constructed wetlands in East Gippsland. Courtesy of Gunaikurnai Land and Waters Aboriginal Corporation



The GLaWAC NRM crew working at the constructed wetlands project. Courtesy of Gunaikurnai Land and Waters Aboriginal Corporation

Case study

The IWM plan for Bairnsdale

Planning for the resilience, liveability and future of the gateway to the Gippsland Lakes

An integrated water management (IWM) plan for Bairnsdale was completed in August 2021, bringing together multiple organisations with an interest in aspects of the water cycle. The need for a coordinated and consistent plan for Bairnsdale was identified as a priority in the East Gippsland IWM Forum 2018 Strategic Directions Statement (SDS). The stage is now set to implement some of the priority projects identified in the plan.

The vision for the Bairnsdale IWM Plan (2020 – 2030) is for 'innovative and collaborative water management to maximise the resilience, liveability and economic prosperity of our East Gippsland communities and connected waterways, wetlands and the Gippsland Lakes.' As well as the vision, it sets out specific objectives, outcomes, and priorities in line with those defined in the SDS.

The plan was informed by consultation with East Gippsland Water, East Gippsland Shire Council, East Gippsland Catchment Management Authority, Gunaikurnai Land and Waters Aboriginal Corporation and the Department of Environment, Land, Water and Planning.

The collaborative process of developing the plan aimed to identify and prioritise IWM opportunities across the area that respond to Bairnsdale's unique social and biophysical context, including consideration of:

- the Mitchell River that runs through the town and supplies water to Bairnsdale
- the Gippsland Lakes and other surrounding environmental assets that provide such valuable recreational assets for locals and tourists
- the need for secure water supplies into the future in the context of climate change and population growth
- the impact of urbanisation on the natural environment
- the development of social and recreational facilities to ensure they are planned for in a 'water-sensitive' manner.

The group evaluated, prioritised, and ranked 21 IWM opportunities. The result was a prioritised list of opportunities, with the 'top 5' being:

- WORLD Sporting Precinct IWM Initiatives
- Recycled Water Network Plan, to extend recycled water use
- Community Outreach for IWM, to improve community understanding of IWM
- IWM Plan for the Bairnsdale Hospital (one of the town's largest water users)
- ensuring compliance with existing council water sensitive urban design requirements during construction to reduce the impact of construction on downstream waterways.

With this groundwork done, IWM stakeholders can now incorporate high priority opportunities into their respective business planning and budgetary processes, to progress them in a collaborative way for the long-term benefit of the Bairnsdale community. Its success will now inform the development of other local IWM plans elsewhere in East Gippsland.



Bairnsdale waste water treatment plant. Courtesy East Gippsland Water



Bairnsdale rotunda. Courtesy Destination Gippsland

IWM OPPORTUNITIES

Opportunities that link to and address IWM challenges for the region were identified and developed by nominated practitioners of organisations participating in the forum.

A summary of the priority IWM opportunities is shown in Table 2, with more detail in the following section. This list is dynamic and will continue to be updated to reflect the forum's priorities and opportunities as they arise.

Partners are committing their 'best endeavours' to ensure priority projects and strategies are moved forward, in line with the shared vision and strategic outcomes of the forum. This will occur through the continued collaboration of partners, the employment of a regional IWM Officer to support forum initiatives, and grant applications and other resourcing to fund the development of business cases and deliver on recommendations.

An annual review will be conducted by the practitioners' group to measure the progress and success of the forum's endeavours.

Nicholson River winery. Courtesy Destination Gippsland



Table 2: IWM opportunities ready to advance in the East Gippsland region.

IWM opportunity	Strategic outcomes								Location	Scale
	Water supply	Wastewater	Flood risk	Waterways	Landscapes	Traditional Owner values	Community values	Jobs and innovation		
Supporting Aboriginal Water Values in East Gippsland	High	High	High	High	High	High	High	High	East Gippsland	Forum area
Supporting Communities to Achieve Their Objectives Around Water	High	High	High	High	High	High	High	High	East Gippsland	Forum area
Bairnsdale IWM Plan Implementation	High	High	High	High	High	High	High	High	Bairnsdale	Town
Stormwater Management Plan	High	High	High	High	High	High	High	High	East Gippsland	Catchment
Recycled Water Treatment and Network Plan (Bairnsdale and Lakes Entrance)	High	High	High	High	High	High	High	High	Bairnsdale and Lakes Entrance	Town
Lakes Entrance IWM Plan	High	High	High	High	High	High	High	High	Lakes Entrance	Town
Crooke Street Wetlands	High	High	High	High	High	High	High	High	Bairnsdale	Precinct
Improving the Health of Waterways Flowing into the Gippsland Lakes and the Tambo, Nicholson, and Mitchell Rivers	High	High	High	High	High	High	High	High	Swifts Creek	Catchment

Shade scale



Low Impact Medium Impact High Impact

- safe, secure and affordable supplies in a changing future
- effective and affordable wastewater systems
- manage flood risks
- healthy and valued waterways and waterbodies
- healthy and valued landscape
- Traditional Owner values, opportunities, and inclusion
- community values reflected in place-based planning
- jobs, economic opportunity and innovation

WATER FOR TRADITIONAL OWNERS

Aboriginal people know water is essential to life, and to creation. The Aboriginal community have a strong cultural connection to Country. Aboriginal communities in East Gippsland include Gunaikurnai, Bidwell and Ngarigo Monero. The forum is committed to working with Aboriginal people to learn from each other, care for Country and deliver on priorities through the Gunaikurnai Whole of Country Plan. One project, outlined below, is primarily focused on Aboriginal water values.

Supporting Aboriginal Water Values in East Gippsland

The East Gippsland IWM Forum process provides the opportunity to acknowledge and develop Aboriginal values for water, to include Aboriginal values in water planning, to support Aboriginal access to water for economic development and to build capacity to increase Aboriginal participation in water management. Each of the project areas has the opportunity to incorporate Aboriginal water values in their planning.

The first step in this process is to gain a stronger understanding of Aboriginal cultural values relating to water in the landscape. GLaWAC is currently working to gather such information. On Country visits are being undertaken with Community to gather assessments of the cultural values of the waterways, as well as explore and capture the stories relating to the waterways in East Gippsland. The role of the IWM Forum in this process will be to support and provide resources to this important project. Once there is a sufficient body of knowledge, then IWM activities can begin to consider Aboriginal water values in project ideas and business-case decisions.

The process will utilise existing networks and processes as much as possible, including:

- the Gunaikurnai Whole of Country Plan
- the signed partnership agreement between GLaWAC and the Gippsland Environmental Agencies.

Gunaikurnai Country covers most of Gippsland. There will therefore need to be a co-ordinated approach to this issue with the neighbouring Gippsland IWM Forum area.

Potential outcomes

Acknowledgement and enhancement of Aboriginal values for water, including Aboriginal values in water planning, supporting Aboriginal access to water for economic development and building capacity to increase Aboriginal participation in water management.

Next steps

1. Support the GLaWAC Aboriginal Water Project to gain a deeper understanding of Aboriginal water values in our landscape.
2. Use the outcomes of the GLaWAC Aboriginal Water Project to build in Aboriginal water values into IWM projects.
3. Co-ordinate with the Gippsland IWM Forum for greater understanding of the mechanism for incorporating Aboriginal consultation and water values into IWM projects.



Status	Implementation
Lead agency	Gunaikurnai Land and Waters Aboriginal Corporation
Implementation partners	East Gippsland Catchment Management Authority, East Gippsland Water, East Gippsland Shire Council, Southern Rural Water
Location	East Gippsland
Scale	Forum area



Mitchell River National Park by Jessica Shapiro. Courtesy Destination Gippsland

IMPROVING WATER MANAGEMENT IN OUR TOWNSHIPS

East Gippsland's population and economy are both growing. The projects within this theme aim to enable climate change adaptation and water-wise growth through water-sensitive and resilient planning, building and development, and the development and implementation of localised IWM plans. They also explore opportunities to identify more diverse water sources, match water sources of different qualities to uses where they are fit-for-purpose and make better use of drinking-quality supplies.

Supporting Communities to Achieve Their Objectives Around Water

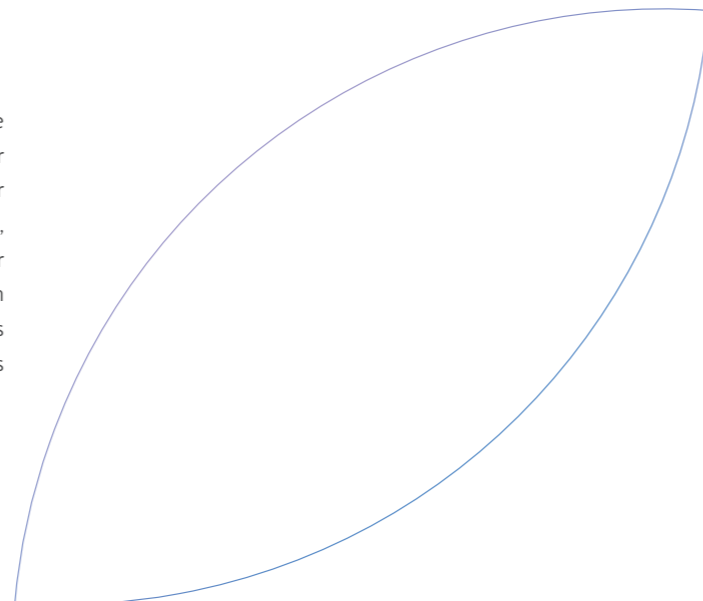
Following the 2019-20 bushfires, local community recovery committees (CRCs) were formed to keep local voices, know-how and expertise front and centre during recovery planning and delivery. This initiative is overseen by Bushfire Recovery Victoria. There are 10 CRCs in East Gippsland:

- Bruthen and District CRC
- Buchan, Gelantipy and Districts Renewal Association Incorporated
- Cann Valley District Reference Group
- Clifton Creek Community Recovery Team
- Errinundra to Snowy CRC
- Mallacoota and District Recovery Association
- Omeo Region Community Recovery Association
- Orbost District Community Recovery and Transition Committee
- Sarsfield Community Association
- Wairewa CRC.

Taking this place-based, community-led approach will ensure projects, grants and support programs developed over the coming months and years will be the right fit for their communities. These will necessarily involve the water cycle, from revegetating burnt riparian areas to incorporating water sensitive urban design (WSUD) into rebuilding work. Forum members are ready to provide IWM support to committees and other community-led organisations doing similar work as opportunities arise.



Status	Identified
Lead agency	Determined by each individual opportunity
Implementation partners	Community Recovery Committees, Bushfire Recovery Victoria, DELWP, East Gippsland Water, community groups
Location	East Gippsland
Scale	Forum area



Bairnsdale IWM Plan Implementation

There is a complex relationship between the private and public assets within the Bairnsdale urban landscape and between the urban landscape, the adjacent wetlands and the Gippsland Lakes. Reviewing IWM opportunities of the system as a whole allows exploration of the synergies and conflicts between built and natural assets and the social, economic, political and environmental systems in which they are contained.

The IWM Plan for Bairnsdale has been prepared to support stakeholder organisations to meet future water cycle challenges and to ensure that Bairnsdale continues to be a great place to live, work and visit. This was an initiative of the 2018 SDS.

The Bairnsdale IWM Plan (2020 – 2030) sets out a vision of 'innovative and collaborative water management to maximise the resilience, liveability and economic prosperity of our East Gippsland communities and connected waterways, wetlands and the Gippsland Lakes.'

As well as the outcomes expressed within the 2018 SDS, the stakeholders to this plan also identified three over-arching objectives:

- reducing reliance on potable water
- improving waterway, wetland and lake health through urban stormwater management
- enhancing the connection and understanding of the water cycle in the Bairnsdale community.

The plan is now being implemented. So far, the Bairnsdale Livestock Exchange is harvesting and reusing stormwater and Magees Gully has been fully revegetated and a new bridge constructed. The Bairnsdale Oval recycled water re-use project is underway.

Priority projects for the next stage of implementation include water management in the WORLD Sporting Precinct redevelopment, developing a recycled water network plan, developing an IWM plan for the Bairnsdale Regional Health Services, incorporating blue and green corridors into urban landscape design, and undertaking a spatial investigation into rainwater harvesting from large roof areas.



Status	Implementation
Lead agency	East Gippsland Water, East Gippsland Shire Council
Implementation partners	East Gippsland Catchment Management Authority, Bairnsdale Regional Health, Gunaikurnai Land and Waters Aboriginal Corporation, Parks Victoria
Location	Bairnsdale
Scale	Town

Fishing at Mallacoota. Courtesy Destination Gippsland



Stormwater Management Plan

The Stormwater Management Plan is one of the top East Gippsland IWM Forum SDS priorities and was partially identified and included in the Bairnsdale IWM Plan.

East Gippsland Shire Council has committed funding to the initial stormwater management plan for East Gippsland. The plan will also contribute to the incorporation of IWM and WSUD into future developments and renewals.

Identifying future WSUD projects, will provide opportunities to continue to develop wetland landscaping works with GLaWAC, and communities.

Status	Committed
Lead agency	East Gippsland Shire Council
Implementation partners	East Gippsland Water and East Gippsland Catchment Management Authority
Location	East Gippsland
Scale	Catchment

Recycled Water Treatment and Network Plan (Bairnsdale and Lakes Entrance)

Greater than 95 per cent of recycled wastewater generated at the Bairnsdale wastewater treatment plant is discharged to Macleod Morass to manage saline intrusion. The remainder is used for irrigation of the Bairnsdale Racecourse. Broadening the use of recycled water throughout Bairnsdale would reduce reliance on potable water supplies, improving the town's resilience and water security, particularly during dry times. Recycled water is climate independent, a relatively reliable source that is suitable quality for irrigation of open spaces and gardens.

The opportunity is to develop a plan for the additional treatment required to improve the quality of recycled water to Class A and an extension of the recycled water network to meet additional irrigation demands that are aimed at greening Bairnsdale (for example, the Main St Gardens), meeting industrial end uses and irrigation of other open spaces. Despite increased use of recycled water in Bairnsdale, the Macleod Morass wetlands will still be maintained by recycled water from the treatment plant. This is because expected growth in the region means there will be increased wastewater, and therefore recycled water, available.

Following the completion of the Lakes Entrance IWM plan (see next project), a more detailed plan for any improved treatment of recycled water and development of a network plan may also be required.

Status	Identified
Lead agency	East Gippsland Water, East Gippsland Shire Council
Implementation partners	East Gippsland Catchment Management Authority, Gunaikurnai Land and Waters Aboriginal Corporation, Parks Victoria
Location	Bairnsdale and Lakes Entrance
Scale	Town

IMPROVING WATERWAY HEALTH

The rivers, waterways, wetlands, and lakes of the region are vitally important for the wellbeing and recreation of residents, the wildlife of the region, and the local tourism sector, which supports jobs and economic growth. The following waterway health projects protect or restore ecosystems and riparian zones, reduce aquatic pollution, manage stormwater better, and allow people in the townships to live in closer harmony with the natural environment.

Lakes Entrance IWM Plan

The Lakes Entrance area is a sufficiently complex urban and natural system to undertake a separate IWM planning process. Greenfield development sites such as the Lakes Entrance Northern Growth Area, for instance, present an opportunity to apply WSUD principles to conserving water, protecting and enhancing local waterways and reducing the footprint of development. The impact of climate change on rising lake levels also presents a particular challenge for urban water planning.

There is an opportunity to incorporate IWM principles into the current development of the Lakes Entrance Growth and Adaptation Strategy and use the outcomes of the strategy to help develop the IWM Plan. The Lakes Entrance Growth and Adaptation Strategy is an East Gippsland Shire Council initiative to develop a 35-year plan to take the Lakes Entrance community from one of the most vulnerable on the Victorian coast to having the most effective plan to adapt to anticipated climate change and urban growth pressures.

There are also opportunities to explore the use of recycled water as a substitute for potable water for suitable public assets close to treated wastewater infrastructure, such as the Lake Bunga public toilets. The IWM Plan would also incorporate some of the key actions assigned to Lakes Entrance catchments in the East Gippsland Shire Council's Urban Waterway Management Strategy, such actions for Merrangbaur Heights and Lake Bunga.

This project is carried over from the 2018 SDS and will draw on the experience of the Bairnsdale IWM Plan.

Status	Committed
Lead agency	East Gippsland Water
Implementation partners	East Gippsland Water, East Gippsland Shire Council, East Gippsland Catchment Management Authority, Bairnsdale Regional Health, Gunaikurnai Land and Waters Aboriginal Corporation
Location	Lakes Entrance
Scale	Town

Lakes Entrance. Courtesy Destination Gippsland



Crooke Street Wetlands

The Crooke Street Wetlands Project is one of the top East Gippsland IWM Forum SDS priorities and was partially identified and included in the Bairnsdale IWM Plan. This wetland development is designed to capture and treat stormwater in the Crooke Street region of East Bairnsdale, which is currently discharging to Jones Bay. It will reduce nutrient loads flowing into the Gippsland Lakes.

The overall project will be funded from multiple sources. It will include:

- the installation of two gross pollutant traps
- a sediment basin and wetland within a proposed retarding basin.

The project will include a detailed design. Existing works to which East Gippsland Shire Council has already committed will be part of the civil works budget.

The overall project will also include landscaping works undertaken by GLaWAC, a Federation University Masters candidate to undertake ecological and nutrient assessments, and a citizen science initiative that will be focused on urban wetlands.



Status	Committed
Lead agency	East Gippsland Shire Council
Implementation partners	Gunaikurnai Land and Waters Aboriginal Corporation, East Gippsland Water, East Gippsland Catchment Management Authority
Location	Bairnsdale
Scale	Precinct

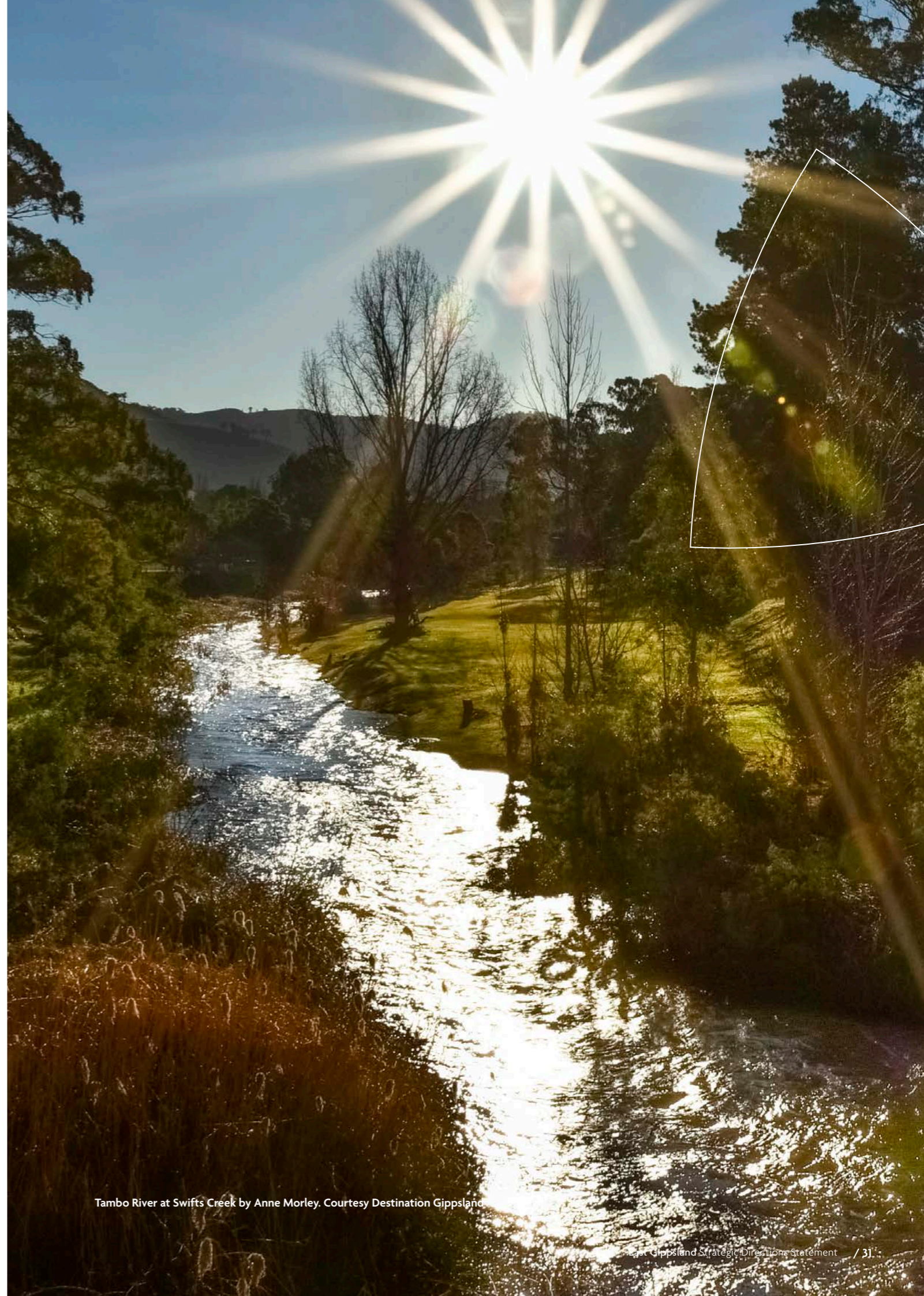
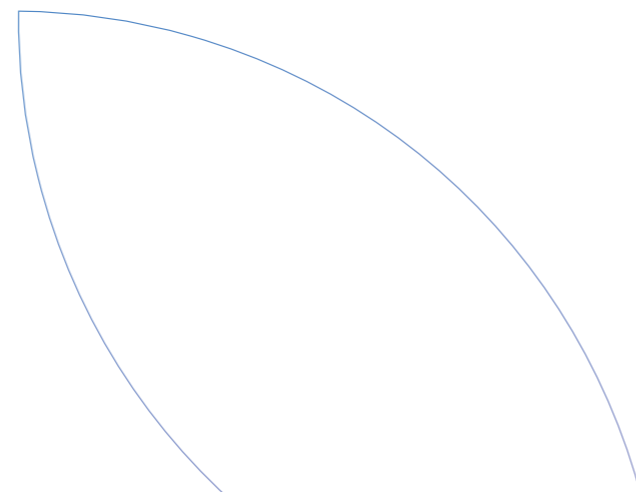
Improving the Health of Waterways Flowing into the Gippsland Lakes and the Tambo, Nicholson, and Mitchell Rivers

East Gippsland Water has an offtake on the Tambo River at Swifts Creek that provides potable water to the township of Swifts Creek and surrounds. The offtake is situated just above the Swifts Creek township and is surrounded by farms, predominately running grazing stock. Where cattle have access to the river at the offtake and upstream, they pollute the raw water source and damage the riparian vegetation.

East Gippsland Water and East Gippsland Catchment Management Authority have worked together with the local farming community to fence and revegetate the Tambo River at the town offtake and upstream – a project initiated as part of the 2018 SDS to improve water quality, bank stability and the quality of riparian vegetation. This continuing project seeks to engage more landholders along the Tambo River and then extend the approach to other farming areas that drain into the Gippsland Lakes and Nicholson and Mitchell Rivers.



Status	Implementation
Lead agency	East Gippsland Catchment Management Authority
Implementation partners	East Gippsland Water
Location	Swifts Creek
Scale	Catchment



Tambo River at Swifts Creek by Anne Morley. Courtesy Destination Gippsland



Integrated Water
Management Forums



Environment,
Land, Water
and Planning