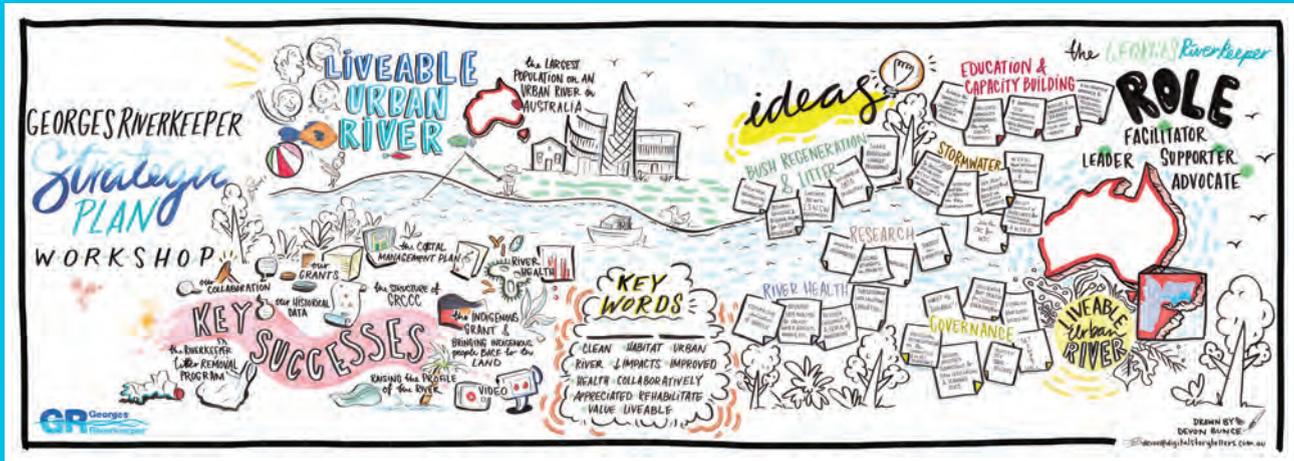




STRATEGIC PLAN 2022-2026



GEORGES RIVER



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ACKNOWLEDGEMENT OF COUNTRY:

Georges Riverkeeper acknowledges the Traditional Owners and Custodians of the Georges River, the Kamegal, Bedigal, Cabrogal, Cannemegal, Gweagal and Norongerral people of the Eora, Dharug and Dharawal nations and we pay our respects to their Elders past, present and future.

CHAIRPERSON'S FOREWORD

As the Chairperson of Georges Riverkeeper, it has been a privilege to see the implementation of the last Strategic Plan (2018-22) and to be a part of the development of the new one. Over the past four years, Georges Riverkeeper has been able to grow and develop in their contribution toward urban waterway management and provide best practice management of our much loved Georges River.

Within this new Strategic Plan, we look forward to continuing the great work of the Georges Riverkeeper and collaborating with the Member Councils and Financial Partner on delivering on programs to positively impact the health of the river and liveability in the catchment.

I would like to thank the Member Councils, their Councillors and Council Officers, and the Financial Partner and other Stakeholders for their ongoing support and assistance in the development of the new Strategic Plan.

Cr. Michael Banasik, Chairperson

PROGRAM MANAGER'S FOREWORD

Drafting, creating and implementing the first Georges Riverkeeper Strategic Plan 2018-2022 was revolutionary for the organisation and has enabled us to work more closely and more effectively with our Member Councils to positively impact the Georges River and its catchment. When I look back at where we started when we were developing the Strategic Plan, I am blown away by the support our Member Councils and stakeholders provided to the team to help us make Georges Riverkeeper what it is today. The development of the Georges Riverkeeper Strategic Plan 2022-2026 is quite similar to the first strategic plan, however this strategic plan is more refined and targeted in its development and subsequent implementation. I look forward to watching the fantastic things Georges Riverkeeper will accomplish, as a new Program Manager takes the reins in the implementation of this new Strategic Plan.

Beth Salt, Program Manager (2018 – 2022)

I have been fortunate to have contributed and been involved with the Georges Riverkeeper over the last 8 years as an officer from Fairfield City Council. It has been an inspiring journey to assist in contributing to the first Georges Riverkeeper Strategic Plan 2018-22. With external pressures and urban impacts to the Georges River catchment greater than ever, now is the time to work even more collaboratively with all river stakeholders to continue to research, plan, engage, and innovate for a healthier, liveable Georges River catchment.

Beth and the Georges Riverkeeper team have left a mighty legacy of what can be achieved on ground and strategically throughout the catchment. As the new Program Manager I am excited to now be on the forefront of working with the team and Committee towards a healthier, liveable Georges River catchment. I look forward to drawing together ideas, research, and the sciences from the enthusiastic and knowledgeable Georges River representatives of the Georges Riverkeeper, and to use this to drive the delivery of the new Strategic Plan 2022-26.

Scott Reyes, Program Manager (2022 –)

THE 4-YEAR STRATEGIC PLAN, 2022-2026

The Strategic Plan sets out the direction that the Georges Riverkeeper will take over the four-year period (2022-2026). Georges Riverkeeper facilitates proactive waterway management that is adaptive and integrated across other areas of member councils, rather than being reactive and piecemeal. There are five focus areas in the Strategic Plan which are:

- Operations Management Program (OMP)
- Catchment Actions Program (CAP)
- River Health & Research Program (RHRP)
- Stormwater & Sewage Program (SWP)
- Education & Capacity Building Program (ECBP)

Detail of activities required to address the objectives of the Strategic Plan will be detailed in Annual Workplans, which will be created leading into each financial year, in consultation with the Georges Riverkeeper Committee.

The Strategic Plan has been written to be implemented alongside other relevant documents related to the management of the Georges River, for example the Coastal Zone Management Plan/ Georges River Catchment Coastal Management Program. This document is not intended to override waterway management plans of member councils or other relevant documents.

**GEORGES RIVERKEEPER'S ASPIRATION GOAL:
BEST PRACTICE ENVIRONMENTAL MANAGEMENT
FOR A LIVEABLE URBAN RIVER.**

REGIONAL CONTEXT

The Georges River catchment stretches from Botany Bay on the east coast of New South Wales west towards Prospect Reservoir and south into bushland around Campbelltown and Appin. The northern and western parts of the Georges River catchment are dominated by the expanses of Sydney's urban sprawl, with natural areas and national parks taking up much of the upper catchment to the south. The total length of the Georges River is around 100 km, with the tidal limit delineated by Liverpool Weir. The water is fresh above the weir and then increasingly saline as the river approaches Botany Bay.

The lower Georges River was first surveyed by Cook in 1770. Since then there have been major morphological changes, notably in the upper reaches of the estuary, where extensive dredging and reclamation has occurred over the past 60-70 years.

Today, the Georges River catchment is home to almost 1.4 million people, which is projected to increase to almost 1.7 million by 2031. The impacts from this large and growing human population in the catchment include habitat loss through urban encroachment, stormwater management issues and erosion, invasion by pest animals and weeds, litter and pollution.

ABORIGINAL HERITAGE

Aboriginal people have occupied the continent for over 40,000 years and it is through the Dreaming that Aboriginal people mark the beginning of time when the Rainbow Serpent moved across the land and created the rivers as it travelled. Biame, the sky spirit, helped shape a barren and featureless world and gave the Aboriginal people the laws to guide their interactions with each other and their environment.

Over thousands of years Aboriginal people have inhabited the Sydney region, where they formed family clans within broader nations. Boundaries between nations were often prominent geographic features, such as mountains or rivers, and the Georges River formed one such boundary. To the north of the river were the people who spoke the Dharug language, which included the Kameygal (Botany Bay), Bediagal (Hurstville/Bankstown), Cabrogal (Cabramatta) and the Cannemegal (Prospect and Fairfield). To the south of the river were the people who spoke the Dharawal language, which included the Gweagal (Kurnell) and the Norongerragal (Menai/Holsworthy).

It was the Kameygal clan that in 1770 made first contact with Lieutenant James Cook and the Endeavour on the foreshores of Botany Bay near the mouth of the Georges River. Eighteen years after that first encounter, the British Navy returned to colonise Australia. For the local Aboriginal people this became a period of dislocation and conflict. In the 19th century, Aboriginal people were obliged to live in missions. There were three main missions on the Georges River and Botany Bay at La Perouse, Sans Souci (on Kogarah Bay) and Peakhurst (Salt Pan Creek).

Aboriginal culture lives on in the Georges River. Middens, scar trees, groove marks, engravings and hand stencils are spread widely across the suburbs within the Georges River catchment. Today, the Georges River has one of the largest populations of Aboriginal people in Australia.

URBANISATION OF THE GEORGES RIVER CATCHMENT

The Georges River has experienced significant changes since European settlement. European settlement of the area was initially delayed when the location for initial establishment of the colony was moved from Botany Bay to Sydney Cove, owing to a lack of supply of reliable fresh water. But, the colony expanded, initially along rivers around Sydney and European settlement along the Georges River accelerated from the 1830s, almost 200 years ago. The upstream limit of the estuary, the National Trust listed Liverpool Weir, is located approximately 46 km from the mouth of the river and was constructed by convict labour 175 years ago to supply water to the growing township of Liverpool. As a result the estuary now has a clearly delineated upstream limit.



The following issues with urbanisation have been noted.

Deforestation - With urbanisation comes a replacement of our bushland with infrastructure to support the growing population living in the area. Deforestation is an unfortunate side effect of urbanisation, replacing forests with built hard surfaces which detrimentally affects the quantity and quality of water entering the Georges River. Deforestation results in habitat loss, which decreases habitat availability for the local flora and fauna, including iconic species like koalas.

Stormwater - The Georges River estuary and its freshwater tributaries receive runoff from an intensively urbanised and industrialised catchment. Controls on industrial discharge of pollutants have improved since the 1970s. But, the estuary has been a major repository for urban and industrial waste, including metalliferous loadings (eg. copper, zinc, nickel, lead). Waste dumps and sewerage overflows also continue to contribute to high pollutant loading into the waterways.

Water Quality and Quantity - From the mouth of the Georges River at Botany Bay to the Como Bridge has good tidal exchange, therefore pollutants entering the estuary within this reach are comparatively well diluted and dispersed with incoming ocean waters. The degree of tidal exchange then reduces significantly with distance upstream even though the freshwater inflows are relatively small, the upper reaches of the estuary remain strongly influenced by the catchment inflows, as indicated by the suppressed salinity concentrations. In addition to the natural flushing and dispersion characteristics of the estuary as described above, the water quality of the Georges River and its freshwater tributaries has been affected notably by a range of anthropogenic factors. It has been estimated that 95% of the total contaminant load to the Georges River and Botany Bay estuary is now derived from stormwater runoff, so the recent focus on stormwater management is considered appropriate.

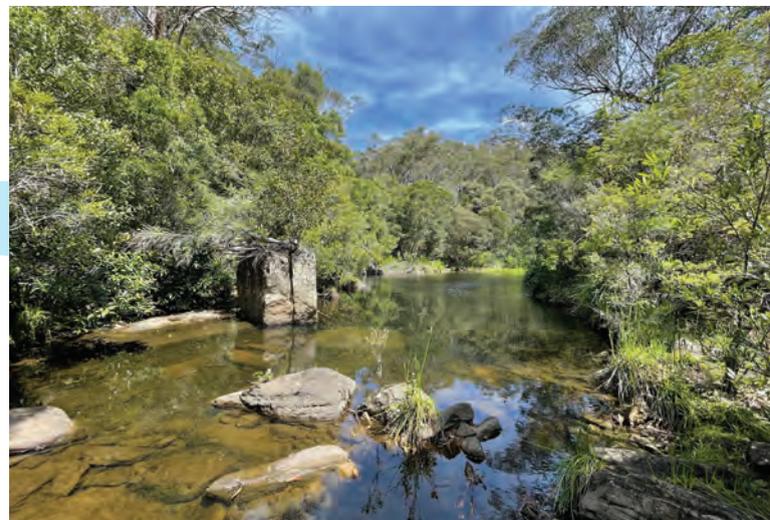
Flooding - Development over the past 40 years has modified flood risks along the Georges River. Although Councils have been diligent in preventing development on the floodplain, there is continual pressure for rezoning, development just above Council's floodplain planning level, and intensification of existing development through dual occupancies.

Sandmining and Dredging - Uncontrolled sand extraction throughout the mid-twentieth century in the upper reaches of the estuary has dramatically changed the river morphology. Implications of this have been dire for the estuary, with reduced tidal flushing, accelerated bank erosion, and water pollution. Meanwhile, sediments in the estuary remain affected from a long history of commercial activities and on-going urban runoff.

Coal Mining - Coal mining occurs in the upper Georges River catchment within Campbelltown City Council and Wollondilly Shire Council Local Government Areas. The River Health monitoring data shows that whilst mining is associated with localised impacts to the Georges River, the impacts are less severe and far less widespread than the effects of urbanisation.

Environmental Values - Despite the notable historical impacts and stressors, the Georges River has managed to maintain significant environmental value. Large sections of the catchment to the south remain forested, while a diversity of habitats and species can still be found across the catchment, including many Endangered Ecological Communities. Georges River catchment is home to:

- 454 species of fauna (both aquatic and terrestrial) including several iconic species such as: koalas, platypus, flying-foxes, swamp wallabies, and grey kangaroos. There are also many important recreational fishing species, such as Yellow Fin Bream, Dusky Flathead, Mulloway, Whiting, Mullet, Blue Swimmer Crabs and Mud Crabs
- 30 riparian vegetation communities
- 29 Endangered Ecological Communities including 23 ha of Estuarine Reedlands, 645.9 ha of Mangrove Forests, 126 ha of Estuarine Saltmarsh and 126 ha of Estuarine Swamp Oak Forest
- 318 ha of seagrass beds that include *Posidonia australis*, which is an Endangered Ecological Population



Human Values: Ecosystem Services - Ecosystems services are the benefits that humans freely obtain from the natural environment. The many and varied benefits are of fundamental importance to human well-being, health, livelihoods, and survival. It is estimated that the Georges River provides over \$2 billion of ecosystem services each year.

Oysters - A specific ecosystem service that has been all but lost from the Georges River is commercial oyster production. In 1992 the lower Georges River estuary supported the State's second most productive oyster growing area with 95 leases that each year produced approximately 18,000 bags of Sydney Rock Oyster valued at over \$3.5 million. However the Georges River oyster industry suffered major losses in the mid-1990s from QX Oyster disease which attacked Sydney Rock Oysters. In the aftermath of QX disease the Pacific Oyster was introduced as a commercial species but in 2010 Pacific Oyster Mortality Syndrome affected large areas of oyster leases. Today the once thriving Georges River oyster industry has been reduced to only two oyster leases operating out of Woolooware Bay.

Liveability - Liveability is the sum of the factors that add up to a community's quality of life, including the built and natural environments, health, economic prosperity, social stability and equity, educational opportunity, and cultural, entertainment and recreation possibilities. The community values the Georges River primarily for its environmental services, and also its recreational potential. Primary contact activities are desirable, while the community considers that ecological conditions should be maintained at a high conservation level (but recognising that some areas are also moderately to highly disturbed).

GEORGES RIVERKEEPER OUR ROLE

Georges Riverkeeper is the business name of the Georges River Combined Councils' Committee Incorporated (GRCCC), formed in 1979 by Councils with a collective responsibility for the health of the Georges River to work together to improve its environmental condition and ongoing management.

Georges Riverkeeper aims to coordinate natural resource management on a catchment basis to achieve greater efficiencies and effectiveness.

Georges Riverkeeper is an entity registered as an Incorporated Association under the Association's Incorporation Act 2009, with reporting responsibilities to the NSW Department of Fair Trading. Georges Riverkeeper operates as a not-for-profit organisation with its own Constitution. The officer bearers of the organisation make up the Executive Group.

OUR ASPIRATIONAL GOAL

The Georges Riverkeeper aspirational goal, which incorporates our vision and mission, is: 'Best practice environmental management for a liveable urban river'.



OUR MEMBERS AND OTHER STAKEHOLDERS

The Georges Riverkeeper Committee consists of 8 Member Councils in the Georges River catchment - Bayside Council, Campbelltown City Council, City of Canterbury Bankstown, Fairfield City Council, Georges River Council, Liverpool City Council, Sutherland Shire Council and Wollondilly Shire Council - and 1 Financial Partner, Sydney Water.

Georges Riverkeeper stakeholders, who may be represented on the Committee, include but are not limited to:

- Corrective Services NSW
- Environmental Education Centres (Georges River and Botany Bay)
- Greater Sydney Local Land Services
- Lands and Water – Crown Lands
- Local Aboriginal Land Councils
- National Parks and Wildlife Service
- NSW Department of Land and Property Information
- NSW Department of Environment
- NSW Department of Primary Industry
- NSW Office of Environment and Heritage
- NSW Roads and Maritime Service
- NSW State Emergency Service
- Various environmentally focussed community groups and other regional organisations

STRATEGIC PROGRAMS

The aspirational goal of the Georges Riverkeeper is best practice environmental management for a liveable urban river. The strategic Programs encompass activities that will allow Georges Riverkeeper to work towards meeting this aspirational goal, with Member Councils and our other Partners.

Five focus areas were identified through a stakeholder engagement process undertaken in the development of this strategy and are represented by the five programs, which are:

-  Operations Management Program (OMP)
-  Catchment Actions Program (CAP)
-  River Health & Research Program (RHRP)
-  Stormwater & Sewage Program (SWP)
-  Education & Capacity Building Program (ECBP)

Although these are distinct Programs they are integrated and work together to protect the health of the Georges River.

Each Program is further explored below, specifically:

- The challenge
- What has been done by Georges Riverkeeper in the past?
- Our goal for the future
- How will we achieve our goal?

When discussing how the goal will be achieved, the role of Georges Riverkeeper is laid out for each Program. The role of Georges Riverkeeper is defined within the terms of:

- **Leader:** lead on identified actions
- **Facilitator:** facilitate others in implementing actions
- **Supporter:** support others to implement actions
- **Partner:** working with stakeholders to achieve identified actions
- **Advocate:** provide strong leadership for key actions

There are a few key points that were identified during the development of the strategy as important to include in the strategy but did not warrant an individual Program and are integrated into each of the five Programs:

- Georges Riverkeeper has a role to advocate on behalf of the river
- The governance structure of the Georges Riverkeeper, and
- Aboriginal representation and advisement into the Programs.

Following this, a Program logic has been developed for each Program with a corresponding monitoring, evaluation, reporting and improvement plan (MERI). The timeframes for the Program logic are outlined below.

- Aspirational Goal: 20+ years
- Long Term Goal: 10 – 20 years
- Intermediate Outcomes: 5 – 10 years
- Outputs/Activities: within 4 years, during the life of the Strategic Plan



OPERATIONS MANAGEMENT PROGRAM



The Challenge

Georges Riverkeeper is a not-for-profit catchment group or regional organisation of councils, that receives funding from Member Councils and Financial Partners to look after the Georges River and its catchment. Georges Riverkeeper is also an Incorporated Association who is governed by the Associations Incorporated Act 2009 and has a Constitution. Georges Riverkeeper also maintains its own insurance relevant to the organisation. With the abolishment of Catchment Management Authorities (CMAs) in New South Wales in 2013, catchment management has been ad-hoc and lacking in funding, coordination and strategic planning. With this missing link in state administration, more pressure and expectation has been placed on catchment groups to do more actions with fewer resources. It is important for Georges Riverkeeper to have an agreed upon Strategic Plan that defines our role and the activities that will be undertaken.

What has been done by Georges Riverkeeper in the past?

This section was added to the reporting of the previous Strategic Plan, as there were many activities that Georges Riverkeeper staff were undertaking, essential to the organisation, that were not captured in the other Programs. The themes and activities below are consistent from the previous Strategic Plan and include: Georges Riverkeeper governance, advocacy and lobbying, reporting, and operations management.

Our goals for the future

This Program encompasses all the overall operations of the organisation.

How will we achieve our goal?

Governance: Georges Riverkeeper consists of a Committee, made up of Councillors, Financial Partner representatives, Council staff, government stakeholders, and community stakeholders.

Advocacy & Lobbying: Georges Riverkeeper will advocate and lobby for the best interests in the Georges River and its catchment, this is a reactive activity dependent on changes in legislation, public perceptions, and governmental pressures.

Reporting: Utilising reporting opportunities to communicate our activities and successes.

Operational: There are several organisational-wide or holistic activities conducted by Georges Riverkeeper – including boat access and maintenance, staff training, managing grant grants, and integration into host Councils.

The Roles of the Georges Riverkeeper in implementing the Operations Management Program

- **Leader:** Georges Riverkeeper will lead the organisation in its management and governance.
- **Supporter:** Georges Riverkeeper will support Member Councils and Financial Partners in their role in the Executive and Committee Groups.
- **Partner:** Georges Riverkeeper will partner with Member Councils, Financial Partners and relevant stakeholders in its role in:
 - advocacy and lobbying
 - access to the Georges Riverkeeper boat
 - reporting
- **Advocate:** Georges Riverkeeper will advocate for the best interests of the Georges River, its catchment and the environment.



OPERATIONS MANAGEMENT PROGRAM (OMP)

ASPIRATIONAL GOAL: Best practice environmental management for a liveable urban river

LONG TERM GOAL	To be a resilient, innovative and sustainable industry leading Catchment Group.
INTERMEDIATE OUTCOMES	To continually identify and implement improvements as required ensuring robust governance and being a resilient and sustainable catchment management organisation.
OUTPUTS	Efficient governance and operational management. Evidence-based advocacy and lobbying in line with our policy. Timely reporting: Annual Workplans, Annual Report, Program Reports, halfway review of Georges Riverkeeper Strategic Plan 2022-2026, State of the Georges River 2024.
ACTIVITIES	<ul style="list-style-type: none"> • Managing Georges Riverkeeper’s finances, operations, and working with the Host Council; managing Member and Partner relationships • Build and establish links with First Nations representative and heritage • Advocacy for the Georges River and lobbying of local, state and federal governments • Reporting • Boat access and maintenance • Staff training • Holistic Grants
INPUTS	<ul style="list-style-type: none"> • Georges Riverkeeper • Committee • Executive • Host Council • Member Councils and Financial Partners • National Parks and Wildlife Service.

CATCHMENT ACTIONS PROGRAM



The Challenge

Litter pollution is constantly washed into our tributaries, river, estuary, bays and can make its way to the ocean. Gross pollutants reduce the recreational amenity and aesthetic value of the environment thus reducing public enjoyment and urban liveability while increasing negative environmental impacts. Plastic in the environment does not biodegrade, rather it photodegrades and breaks down into microplastics and remains plastic. Other microplastics enter the litter stream through wear (e.g. tyre dust and clothing microfibres) and poor industrial housekeeping (e.g. nurdles, small plastic pellets used to make plastic products). Microplastics accumulate in sediments such as the sand on beaches and benthic sediments. Plastics that enter waterways adsorb other pollutants on their surface, so if ingested by marine animals, not only the plastic enters the food web, but also the associated adsorbed pollutants.

The waterways of the Georges River also support significant biodiversity. Numerous recreationally important fish species inhabit the river as well as endangered species, including the Macquarie Perch. The mouth of the Georges River is home to some of the last remnant oyster reefs in the state. This area also sustains the largest area of saltmarsh in the Sydney Basin and significant seagrass beds. Migratory birds, many of which are endangered or threatened with extinction, use these areas for roosting, while utilising mudflats throughout the estuary for feeding. There are many ongoing threats to biodiversity within the river including: invasive species, stormwater runoff, pollution events, impacts from recreation, erosion and sedimentation to name a few. Protecting the river from these threats requires a large amount of resources from various agencies.

What has been done by Georges Riverkeeper in the past?

The Catchment Actions Program (CAP) is a cornerstone Program of the Georges Riverkeeper. The Program removes litter from land surrounding the river and tributaries, preventing the litter being transported to downstream waterways. The Program also coordinated grant driven bush regeneration and revegetation projects in line with Member Council natural resource management plans.

Our goal for the future

Protecting and improving the amenity, aesthetics, biodiversity and ecosystem functions of the Georges River is a key goal which can be addressed by the CAP. By committing to improve the amenity, aesthetics and functions of the Georges River, we are placing importance on the liveability of the river.

How will we achieve our goal?

The strength of Georges Riverkeeper is a holistic catchment approach to natural resource management that fosters regional outcomes. Georges Riverkeeper facilitates proactive waterway management that is adaptive and integrated across other areas of council, rather than being reactive and piecemeal.

The Roles of Georges Riverkeeper Catchment Actions Program

- **Leader:** Georges Riverkeeper will lead the removal of litter from around waterways of the Georges River catchment.
- **Supporter:** Georges Riverkeeper will support Council biodiversity and bushland management plans and support relevant Council Programs and initiatives.
- **Partner:** Georges Riverkeeper will partner with Corrective Services NSW in the delivery of on-ground litter removal, Councils and other relevant stakeholders to implement litter prevention projects, and other relevant stakeholders to apply for grant funding to deliver biodiversity works, including bush regeneration projects.
- **Advocate:** Georges Riverkeeper will advocate for issues where the intended outcome is reduced litter, preserved and protected biodiversity, and improved natural resource management.



CATCHMENT ACTIONS PROGRAM (CAP)

ASPIRATIONAL GOAL: Best practice environmental management for a liveable urban river

	<ul style="list-style-type: none"> • Protect the aesthetics and biodiversity of the Georges River and its catchment. 	
LONG TERM GOAL	LITTER	BIODIVERSITY
	A cleaner catchment through reduced litter.	Preserving, expanding and protecting the natural area ecosystems, native vegetation and biodiversity within the Georges River catchment.
INTERMEDIATE OUTCOMES	Reducing the volume of litter within the Georges River, tributaries and catchment.	Preserve, expand and protect biodiversity in the catchment. Conserve and improve the condition of fragmented bushland and riparian corridors.
	<p>Rubbish removed from the environment.</p> <p>WHS approved worksites by Georges Riverkeeper and Corrective Services.</p> <p>Statistics reported to Members, Financial Partners, and stakeholders.</p> <p>Litter prevention projects implemented.</p>	<p>Bush rehabilitation, regeneration and revegetation of native ecosystems across the catchment.</p> <p>Projects that seek to protect, promote and monitor the biodiversity of the Georges River and its catchment.</p>
ACTIVITIES	<ul style="list-style-type: none"> • Annual WHS approval of worksites • Review of worksites and addition or removal of worksites as required • Rubbish collection at Corrective Services NSW sites • Partner with a Member to deliver a Clean Up Australia Day event annually • Development and implementation of a Litter Prevention Strategy 	<ul style="list-style-type: none"> • Grant driven biodiversity, specifically bush-regeneration projects • Monitoring of endangered migratory shorebirds within Sutherland Shire and Bayside Councils and National Parks estate in collaboration with Greater Sydney Local Land Services (GSLLS) and the Australian Waders Study Group • Assist councils with priority weed surveillance • Advocate for and implement natural resource management in partnerships
INPUTS	<ul style="list-style-type: none"> • Legislation (State and Federal) policy and plans • Council strategies and priorities • Corrective Services NSW • Grants and related Steering Committees • Volunteers and community organisations • Stakeholder partnerships (i.e. government organisations, Conservation Volunteers Australia, Local Aboriginal Land Councils, GSLLS, NSW EPA Litter Prevention Unit) • Member Councils and Financial Partners • Georges River Estuary Coastal Zone Management Plan/ Georges River Catchment Coastal Management Program • Catchment Action Program Working Group 	

RIVER HEALTH & RESEARCH PROGRAM



The Challenge

Urbanisation causes many issues which detracts from the liveability of waterways. This program aims to approach this issue through appropriate monitoring of river health, and by contributing to research developments. Monitoring of the river is a vital component of an adaptive management framework. Information is efficiently and effectively used in the management of waterway improvement. Moreover, best practice management is adaptive and requires keeping abreast of research developments. Georges Riverkeeper will focus on the issues relevant to the natural resource management of Councils.

What has been done by Georges Riverkeeper in the past?

Previously, this was two separate programs: The River Health Monitoring Program and the Research Program.

The River Health Monitoring Program applied scientifically rigorous methods to the assessment of freshwater tributaries and estuarine sections of the Georges River. The program reported on water quality including: physical condition and chemistry of the water, macroinvertebrates and riparian vegetation.

Since the implementation of the 2018-2022 Georges Riverkeeper Strategic Plan, Georges Riverkeeper has relationships with several Universities in New South Wales and has collaborated with many of them for research within the Georges River catchment.

Our goal for the future

The River Health & Research Program strives to act as a secure custodian of Georges River environmental data that is useful for informing best practice waterway management by Member Councils and, diverse stakeholders about the

condition of waterways. This Program also aims to produce research to aid evidence-based best practice management of urban waterways. The strategic collection of data and practical application of the knowledge gained from the data is essential to becoming a best practice urban waterway monitoring Program.

How will we achieve our goal?

River health monitoring will be directed towards monitoring to inform multiple stakeholders. Urban water management is key and is specific to the priorities of the Georges River and its catchment.

The Roles of Georges Riverkeeper for the River Health Research Program

- **Leader:** Georges Riverkeeper will lead the identification of major knowledge gaps to be addressed through partnerships with universities. The collection and analyses of waterway monitoring data across the Georges River and its catchment to ensure the implementation of best practice waterway management.
- **Facilitator:** Georges Riverkeeper will utilise relevant research and report to different audiences and stakeholders, reaching a shared understanding of current conditions, and to inform effective waterway management policies, actions and solutions for the Georges River and its catchment.
- **Supporter:** Georges Riverkeeper will provide advice, supervision, data, and resources to support the establishment of research projects within the Georges River and its catchment and help members in the effective and efficient allocation of resources to achieve best practice waterway management.
- **Partner:** Georges Riverkeeper will partner with Councils, Financial Partners, universities, research organisations, NSW Government, Federal Government and other stakeholders to identify and address knowledge gaps that hinder the implementation of best practice management of waterways in the Georges River and its catchment.
- **Advocate:** Georges Riverkeeper will use up-to-date monitoring data and the results of research to inform evidence-based advocacy to protect and enhance liveability of waterways in the Georges River and its catchment.



RIVER HEALTH & RESEARCH PROGRAM (RHRP)

ASPIRATIONAL GOAL: Best practice environmental management for a liveable urban river

<p>LONG TERM GOAL</p>	<p>Act as a secure custodian of Georges River catchment environmental data. Drive research to increase the evidence-base required to support best practice waterway and catchment management. Become recognised as a best practice urban waterway monitoring Program.</p>
<p>INTERMEDIATE OUTCOMES</p>	<p>Provide data that informs effective urban waterway management. Identify knowledge gaps and provide data to guide research. Maintain research partnerships to increase links between science (research), policy and management.</p>
<p>OUTPUTS</p>	<p>Produce the River Health Report Card 2021-2022 to be released in 2022. River Health grades for 2023-2024 (to report in the State of the River Report 2024). River Health grades for 2025-2026 and produce River Health Report Card 2026. Evidence-based research published in literature, presented at conferences. Rapid Visual Assessments.</p>
<p>ACTIVITIES</p>	<ul style="list-style-type: none"> • Traditional River Health seasonal freshwater monitoring in spring and autumn (in 2023-2024 financial year for reporting in the 2024 State of the River Report) and 2025-2026 monitoring for reporting in 2026 Report Card. • Estuary monitoring – (in 2023-2024 financial year) biennial, warmer months – October to March – for reporting in in the 2024 State of the River Report) and in 2025-2026 for reporting in 2026 Report Card. • Working with DPE to determine local indicators and triggers of water quality. • Conduct rapid visual assessments for use in the Georges River Catchment Coastal Management Program and other management plans. • Provide internship experience for University students. • Facilitate the sharing of case studies of waterway management projects with Councils. • Information sharing with Sydney Water and Member Councils. • Project-based research relevant to Members. • Reactive water quality monitoring for spills, incidents and disasters. • AUSMAP monitoring of microplastics.
<p>INPUTS</p>	<ul style="list-style-type: none"> • Baseline data (since 2009) • Council waterway management plans • Legislation and policies (local, state and federal) • Georges River Catchment Coastal Management Program • Stakeholder data • River Health Research Working Group • Ecoserver for rapid visual assessment data storage • University projects

STORMWATER & SEWAGE PROGRAM



The Challenge

Urbanisation is the major land use presently influencing the condition of waterways managed by Member Councils across the Georges River catchment. With urbanisation comes stormwater and sewage services, which are a significant point source of nutrients, pathogens and sediment within the Georges River catchment. Research in the Georges River catchment has shown that ecological degradation occurs in association with the increased catchment imperviousness that occurs in urban areas, and we know that what traditional design of urban landscapes stormwater detrimentally affects receiving waterways. Stormwater picks up contaminants as it flows over rooftops, roads and paths, plus can trigger overflows of sewage by overwhelming existing sewerage systems.

What has been done by Georges Riverkeeper in the past?

In the previous Strategic Plan this Program was only focused on stormwater. Disseminating information and knowledge sharing of Water Sensitive Urban Design principles between members, implementing the 'Get The Site Right' Campaign, convening the Floodplain Sub-Committee and associated investigative grant, and ensuring stormwater is a focus was work encompassed by this Program.



Our goal for the future

This Program has expanded to include sewage, another important point source of pollution within the Georges River catchment. As stormwater and sewerage infrastructure is the responsibility of either individual Councils or Sydney Water, Georges Riverkeeper's goal is to have a marked impact on point source pollution to improve the water quality of the Georges River and its tributaries.

How will we achieve our goal?

Sydney Water will become a Financial Partner of Georges Riverkeeper at the commencement of this Georges Riverkeeper Strategic Plan 2022-2026. This partnership has allowed for this Program to include sewage moving forward. Exploring ways to decrease the frequency and severity of wet and dry weather overflows will be a key project to achieve better water quality and healthier catchments. Georges Riverkeeper will continue to be an active member in the stormwater industry and ensure that members and other stakeholders are aware of the best management practice standards that should be implemented for a healthy, liveable urban river.

The Role of Georges Riverkeeper for the Stormwater & Sewage Program

- **Leader:** Georges Riverkeeper will continue to influence best practice waterway management regarding point source pollution.
- **Facilitator:** Georges Riverkeeper will facilitate the coordination of any grants for stormwater when available.
- **Supporter:** Georges Riverkeeper will support members in implementing best practice stormwater and sewage management to ensure that sustainable urban water management is embedded into development and member activities and share lessons learnt.
- **Partner:** Georges Riverkeeper, Sydney Water and Member Councils will communicate and work together to deliver best practice stormwater and sewage management.
- **Advocate:** Georges Riverkeeper will advocate for the river in stormwater and sewage issues and for innovative planning regulation and new technologies for water quality and catchment improvements.

STORMWATER & SEWAGE PROGRAM (SWSP)

ASPIRATIONAL GOAL: Best practice environmental management for a liveable urban river

<p>LONG TERM GOAL</p>	<p>Contribute to State and National Stormwater policy. Increase strategic WSUD uptake in members on-ground works across the catchment. Improved water quality from fewer point source inputs by maintaining or improving compliance of dry weather overflows and improve Sydney Water’s response to incidents.</p>
<p>INTERMEDIATE OUTCOMES</p>	<p>Improve stormwater and sewage management towards regulatory and best practice standards to improve the quality and quantity entering the Georges River and its tributaries. Protect and increase the swimming sites in the Georges River through the Beachwatch Program and Riverwatch Program.</p>
<p>OUTPUTS</p>	<p>Collaborate with Council, State and Federal policies for implementation of best practice management of stormwater, sewage, flood, catchment and coastal management. Implementation of the Georges River Catchment Coastal Management Program. Reduction in the risk and impact of wet weather overflows and improved communication and response to dry weather overflows and a reduction in their frequency. Community values and risk assessment process conducted to set priorities around recreation and determine where the risk are for integration into infrastructure planning.</p>
<p>ACTIVITIES</p>	<ul style="list-style-type: none"> • Development of the Georges River Catchment Coastal Management Program • Implementation of the ‘Get The Site Right’ Campaign to aid in erosion and sediment control in the catchment. • Convene the Georges River Floodplain Sub-Committee with Member Councils, Financial Partners, NSW Department of Planning and Environment and NSW State Emergency Service and any other relevant stakeholders. • Engage with Sydney Water on asset and planning activities which seek to reduce environmental impact from Dry and Wet Weather overflows, i.e. wet weather overflow abatement and dry weather leakage program. • Use existing models and explore opportunities to expand modelling capability for a better understanding of how point source pollutants travel throughout the catchment and waterways to determine solutions. • Create a Clean Water Working Group with Member Councils, Sydney Water and other relevant stakeholders to ensure open lines of communication on point source pollution issues.
<p>INPUTS</p>	<ul style="list-style-type: none"> • Sydney Water in-kind contributions • Council strategies and policies • Botany Bay Water Quality Improvement Plan • Georges River Catchment Coastal Management Program • Stormwater NSW • River Health Research Program data – driving evidence-based activities • Botany Bay integrated catchment and waterway model • Sydney Water data • Community values surveys

EDUCATION & CAPACITY BUILDING PROGRAM



The Challenge

To achieve best practice management, Georges Riverkeeper needs to engage with a broad range of stakeholders who have differing level of water literacy and knowledge of the main issues (both values and threats) affecting the liveability of waterways across the catchment and how to effectively manage those issues.

Firstly, our catchment community, where there are over 1.4 million residents living in the Georges River catchment, with the potential for each individual to carelessly increase impacts on waterways, or appreciate the multiple values of well managed waterways and actively engage in reducing their impacts. Secondly, educating students about the river and catchment and allowing them to learn to enjoy the environment will increase the chances of these areas being protected and valued by the greater community through conversation and information sharing. Thirdly, Councils and Georges Riverkeeper staff require training, upskilling and opportunities to learn new research and from each other in order to do their role effectively. And finally, Councillors are the decision makers of local governments, so ensuring they have the correct information to make decisions is essential to protect the Georges River and its catchment.

What has been done by Georges Riverkeeper in the past?

The Education & Capacity Building Program achieved many things in the implementation of the 2018-2022 Strategic Plan, including:

- A presence on social media disseminating information, events, etc. for the catchment community.
- Holding events for the community such as the Paddle Against Plastic for Clean Up Australia Day.
- Producing two education modules for two stages that are linked to the curriculum promoting the Georges River and its catchment for teachers.

- Hosting many webinars for members on interesting relevant topics.
- Operating, maintaining and expanding the Georges Riverkeeper website, a major resource for Georges Riverkeeper, Councils and the community.
- Production and distribution of factsheets.

Our goal for the future

Develop and disseminate education materials to foster a shared understanding of issues and solutions for best practice management of urban waterways. To increase the capacity of Member Councils to implement best practice waterway management.

How will we achieve our goal?

The aim of this Program for the future is to be focused on four main audiences: our catchment community, schools, Council and Partner staff, and Councillors. Georges Riverkeeper has a Communications Framework that sits alongside this Strategic Plan to ensure effective, coordinated communication to target audiences, which is essential to achieving the goals of the Strategic Plan. Georges Riverkeeper will continue and expand on what we have previously implemented for the catchment community. Georges Riverkeeper will promote and work with stakeholders for schools to use the education modules produced in the previous strategic plan. Emphasis for this strategic plan will be on increasing the training and capacity building for Council and Partner staff and Councillors.

The Roles of Georges Riverkeeper for the Education & Capacity Building Program

- **Leader:** Georges Riverkeeper will lead the development of materials to educate a range of audiences about the values and threats for waterways in the Georges River catchment.
- **Facilitator:** Georges Riverkeeper will facilitate regular events to increase the capacity of member councils to implement best practice waterway management across departments.
- **Supporter:** Georges Riverkeeper will support groups wishing to disseminate information aimed at reaching a shared understanding of waterway issues and solutions across stakeholder groups in the Georges River catchment.
- **Partner:** Georges Riverkeeper will partner with the relevant stakeholders and environmental educators to increase intergenerational awareness of the values of waterways across the Georges River catchment.
- **Advocate:** Georges Riverkeeper will use a range of educational materials and social platforms to advocate for a liveable urban river.



EDUCATION & CAPACITY BUILDING PROGRAM (ECBP)

ASPIRATIONAL GOAL: Best practice environmental management for a liveable urban river

<p>LONG TERM GOAL</p>	<p>Support the community in changing attitudes and behaviours to achieve a liveable urban river. Inter-generational awareness of the value of natural areas and liveable urban rivers. Increased understanding and on-ground best practice environmental management across the catchment through implementation of better plans and policies.</p>
<p>INTERMEDIATE OUTCOMES</p>	<p>Increase community water literacy and value of the river and its catchment. Students are educated about the value of natural areas and liveable urban rivers. Implementation of best practice environmental and urban river management.</p>
<p>OUTPUTS</p>	<p>Communications Framework. Increased community understanding of what is required and what is being done to achieve a liveable urban river. Educators implementing the Georges Riverkeeper Education Modules. Increased knowledge and capacity of Council and Partner staff and Councillors regarding urban river management.</p>
<p>ACTIVITIES</p>	<ul style="list-style-type: none"> • Targeted community education. • Operation and development of the Georges Riverkeeper website. • Maintain a social media presence to educate the community. • Work with stakeholders and promote the use of the Education Modules and explore other opportunities. • Provide capacity building opportunities for Council and Partner staff that are relevant and beneficial to carry out their role and better protect the Georges River and its catchment. • Provide capacity building opportunities for Councillors that are relevant and beneficial to their understanding of the Georges River and its catchment in order to make better decisions for Council.
<p>INPUTS</p>	<ul style="list-style-type: none"> • Georges Riverkeeper Programs and Strategic Plan • Communication Framework • Georges River Environmental Education Centre • Schools • Catchment Community • Catchment Groups • Grants

G E O R G E S R I



Georges Riverkeeper wishes to thank everyone who was involved in

Sydney
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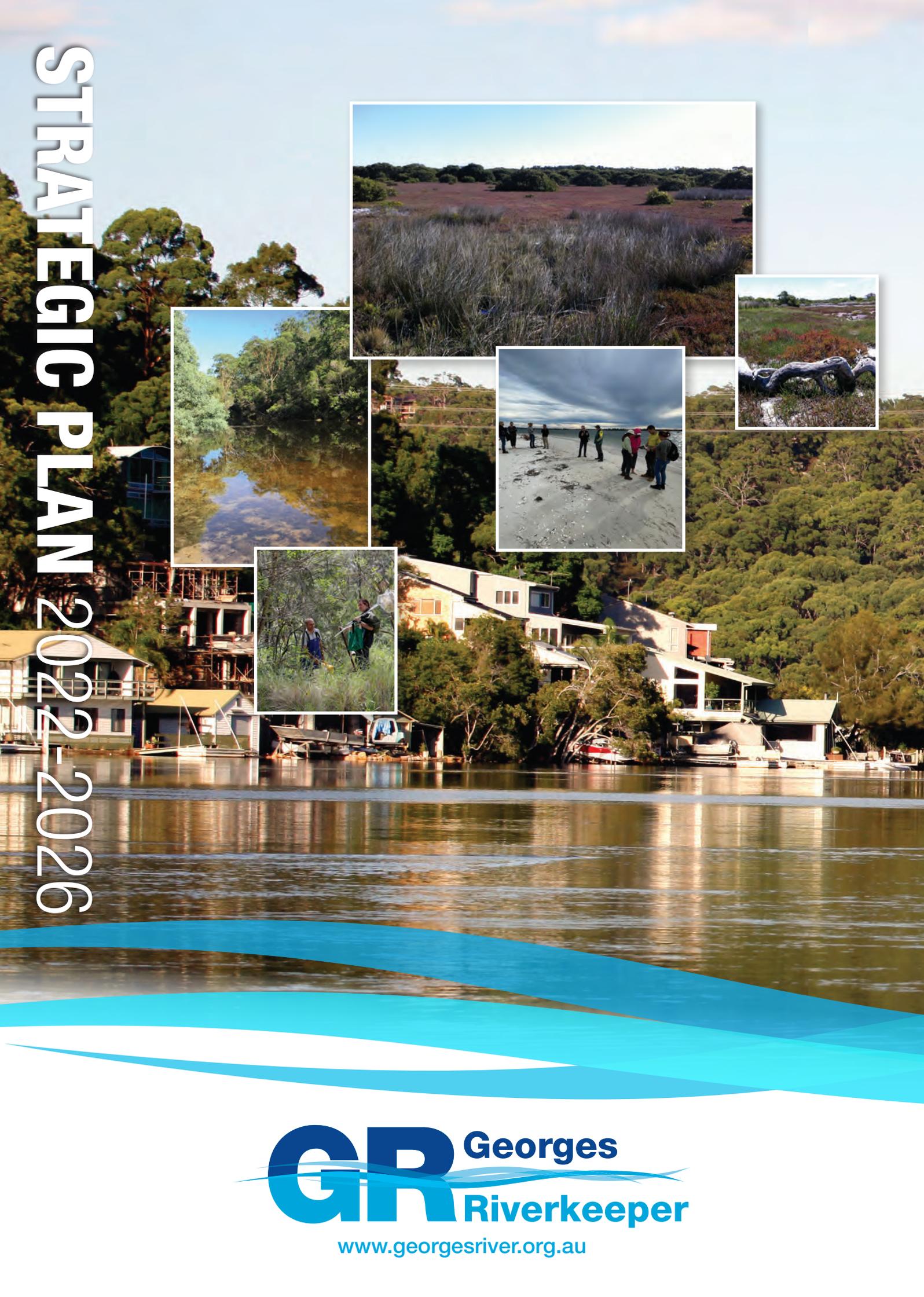
VERKEEPER



developing the Strategic Plan, particularly the Council staff involved



STRATEGIC PLAN 2022-2026



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