



Being the change that is needed

Stewardship Report | 2025



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Chair's foreword



A message from the FPRH Chair

It is with great pleasure that we present the 2025 Stewardship Report for the Fitzroy Partnership for River Health (FPRH). This year, our report is enriched with ten insightful case studies that showcase the diverse and innovative efforts of our partners across the agriculture, mining, energy and government sectors.

Our partner's Stewardship journey this year has been marked by significant milestones and collaborative achievements. The case studies featured in this report are a testament to the focused and impactful ingenuity of our partners. From the *Tailored Support for Graziers Provides More for Less to Understanding Soil – A Key to Water Stewardship* initiative, which underscores the critical role of soil health in water conservation, each story is a beacon of progress. *Woorabinda Healing Country and Gully Remediation* project highlights the importance of traditional knowledge in land and water management.

We have also seen remarkable efforts in *Managing Water Pollution from Urban Areas*, where innovative solutions are being implemented to tackle urban runoff and its impacts on our waterways. *The Scientific Consensus Statement on Reef Protection* brings together experts to agree on the best practices for safeguarding our precious reef ecosystems. Additionally, the focus on Water Recycling and Reuse in Queensland's Coal Mining Industry demonstrates the sector's commitment to sustainable water management.

Our long-standing partnerships continue to thrive, as evidenced by the *Decade Long Partnership in Protecting Waterway Health*. This enduring collaboration has yielded significant improvements in water quality and ecosystem health. The Waterway Stories initiative by our own FPRH Team has been particularly inspiring, connecting communities with their local waterways through storytelling, fostering a deeper appreciation and stewardship of our natural resources.

These achievements are not just numbers on a page; they represent real, positive changes in our environment and our communities. They are the result of hard work, collaboration and a shared vision for a healthier, more sustainable future. Looking ahead, the innovation, collaboration and adaption we see in this year's stewardship report will allow practical and meaningful solutions to be developed to the complex challenges we may face.

I extend my deepest gratitude to all our partners for their unwavering support and dedication. Your contributions are invaluable, and together, we are being the change that is needed.

Tim Kendrick



The first stewards

With utmost respect we acknowledge that First Nations people have cared for this continent for over 65,000 years and pay our respects to them, their cultures and Elders past, present and emerging. We acknowledge the Barada Barna, Widi, Jangga, Barada Kabalbara Yetimarala, Gaangalu Nation People, Koinjmal, Darumbal, Woppaburra, First Nations Bailai, Gurang, Gooreng Gooreng, Taribelang Bunda People, Wulli Wulli Nation People, Wadja, Iman/Jiman, Western Kangoulu, Kanolu, Bidjara, Karingbal and Wangan and Jagalingou (Clermont- Belyando) Area People as the First Nations peoples of the waters, and lands, within our reporting region.

We look forward to continuing to engage with these first stewards and their contacts and representatives to understand their care for country, their connection to waterways and to ensure their values and priorities are considered as industry, government, environment and community moves forward together.



The Fitzroy Basin is home to some of the most productive farming and grazing land in the nation. As the world changes, government, natural resource management organisations, consultants and agricultural producers are working harder to manage our environmental assets while building on their capacity for a better future.

Tailored Support for Graziers Provides More for Less



Access to tailored extension support and the best available information on soils, climate, pasture and cattle management are just some of the benefits that Fitzroy graziers are receiving through the Queensland Government's Grazing Practice Change Program.

The \$6 million program was announced in 2024 with Farmacist, Resource Consulting Services and Dawson Catchment Coordinating Association delivering projects in the Fitzroy.

The program, which also operates in the Burdekin, Mackay Whitsunday and Burnett Mary regions, is supporting around 50 Fitzroy graziers to build their business resilience while reducing soil loss to catchment waterways.

Graziers are also provided with opportunities to link to environmental markets and to connect with the wider grazing community through peer-to-peer engagement.

The Grazing Practice Change Program is funded through the Queensland Reef Water Quality Program.

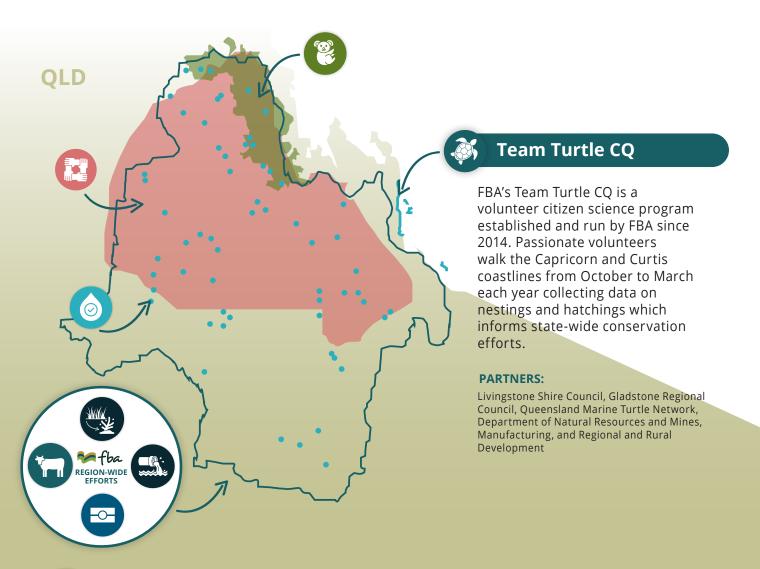


People. Environment. Future.



Working with a diverse network of organisations, communities, and people, FBA is leading innovative solutions that protect and enhance the environment for a better regional future.

Referring to the map below, explore a selection of impactful FBA-led initiatives and the dedicated people and organisations supporting and contributing to their success.





Reducing Sediment Runoff to Protect the Great Barrier Reef

FBA is working to reduce fine sediment impacts on the Great Barrier Reef by delivering large scale landscape improvements in priority catchments. Through targeting the restoration of eroding gully systems, the rehabilitation of streambanks, and addressing paddock erosion will improve the health and productivity of the region.

PARTNERS:

Land managers, Civil contractors, Waterway engineers, Department of Climate Change, Energy, the Environment and Water.



Empowering First Nations in Water Management

On behalf of the Queensland Department of Local Government, Water and Volunteers, FBA has lead communications with most of the First Nations Peoples across the Fitzroy and worked with over 75% to understand their desired cultural outcomes for the management and allocation of water in the Fitzroy and to inform the revision of the Fitzroy Water Plan.

PARTNERS:

All First Nations Peoples in the Fitzroy region, Queensland Department of Local Government, Water and Volunteers



Strengthening Northern Beef Businesses (NB2)

FBA supports two Northern Breeding Business (NB2) peer-to-peer producer groups to enhance the sustainability and productivity of the region's beef industry. By focusing on reproductive rates, mortality reduction, increased turn-off weights, and improved genetic potential, this initiative helps graziers optimise their business operations.

PARTNERS:

Land Managers, Meat & Livestock Australia, Northern Australia Beef Research Council



Fitzroy Regional Receiving Environment Monitoring Program

Fitzroy Regional Receiving Environment Monitoring Program (FRREMP) assesses aquatic ecosystem health to build a longer-term picture of water quality while identifying if there are any adverse impacts on waterway health as a result of mine water releases.

PARTNERS:

Anglo American, BHP Mitsubishi Alliance, Middlemount Coal, Stanmore, Whitehaven, Fitzroy Partnership for River Health



Paddock to Reef: Integrated Water Quality Monitoring

The Paddock to Reef Integrated Monitoring, Modelling and Reporting Program measures and reports on water quality factors that impact Reef health. Since 2009, FBA has led the collection of regional data that helps to inform the program and enacted adaptive management action with land managers.

PARTNERS:

Department of the Environment, Tourism, Science and Innovation, Department of Primary Industries, Department of Climate Change, Energy, the Environment and Water, Land managers



Protecting Koala Populations in the Clarke-Connors Range

The Clarke-Connors Range has one of the most significant koala populations in regional Queensland. Action is protecting and improving the quality, and connectivity of koala habitat by delivering weed control and fire planning and knowledge sharing.

PARTNERS:

Barada Barna Aboriginal Corporation, Barada Kabalbara and Yetimarala People and Widi People Koala Research Central Queensland (CQUniversity), Central Queensland Koala Advisory Group, Local land managers, Department of Climate Change, Energy, the Environment and Water



Grazing Resilience and Sustainable Solutions (GRASS)

The GRASS program supports graziers in improving land management practices to reduce soil loss and sediment runoff. Through personalised action plans developed by FBA's Land Management Officers, participants not only meet Reef protection regulations but also enhance the sustainability of their enterprises.

PARTNERS:

Department of Primary Industries, NQ Dry Tropics, Burnett Mary Regional Group, Department of the Environment, Tourism, Science and Innovation

To learn more, visit **fba.org.au**





Woorabinda Healing Country and Gully Remediation

Eroding gullies are a big problem for communities and for land managers like the Woorabinda Rangers, as well as for ecosystems like the Great Barrier Reef. But they can be repaired.

Through the Reef Assist program, Greening Australia has been working with the Woorabinda Aboriginal Shire Council, Woorabinda Rangers and technical experts Neilly Group Engineering to:

- Rehabilitate gullies and prevent erosion on Ghungalu/Ghangalu/Gaangalu Country in Central Queensland
- Create employment and training opportunities for community
- Improve water quality for the Great Barrier Reef.

Three different gullies have been repaired using different methods including reshaping, rock chutes, whoa boys and creating bund walls.

Fencing was also installed to exclude stock and vegetation cover is being re-established to hold the land surface together, helping to create healthy water movement across the landscape.

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Three different gullies have been repaired using different methods including reshaping, rock chutes, whoa boys and creating bund walls.





Understanding Soil - A Key to Water Stewardship

Central Highlands Grower Neek Morawitz has been involved in growing cotton since 1984 when his dad Carl began growing the fibre in the Central Highlands.

The crop became part of the family's cropping rotation and in the early 2000's Neek began growing cotton in his own right on a property at the bottom of the Comet River on the Nogoa McKenzie junction.

The efficient use of water has always been a key element in the success of the Morawitz farming strategy and Neek describes his own approach as being a combination of science, best practice and gut feel – and that combination has served him well for many years.

"One of the things I do is stretch the deficits when conditions allow, by delaying the timing of irrigations a bit more than most and past what some of the data might suggest, and that can help the plant to be more resilient. But you can't make the plant tough without first understanding your own soil types."

Neek well and truly understands the soil he is dealing with on his farm. "I've got deep alluvial soil here, basically flood plain soil, and I know how it performs and what it needs.

"What I like to do is incentivise the root system to chase the water a bit and get that plant plugged in deeper into the profile and the moisture that is there. I feel I grow more productive cotton by doing that."

Neek monitors his cotton crops closely for signs of stress. "I like to hold off a bit more. It helps to drive the root system more aggressively to seek moisture and sets us up a bit better to withstand extremes of temperature resulting in a tougher plant. I like to keep them on the edge of happy!

"I use water probes to assist in the decision-making process and sometimes a couple of extra days can make all the difference. A little bit of stress is not necessarily a bad thing, in fact it can positively impact the result."

While Neek's approach may not be all science, agronomically it's smart practice and because he's been doing this for many years, he can tell when to water just by taking a close look at the plant.

"Circumstances change from paddock to paddock and region to region. It's knowing what you are working with that helps improve your decision-making process."

Since 2013 Neek has been a participant in the Cotton Water Productivity Benchmarking project and has consistently rated in the top 20% of farms assessed for their water use efficiency outcomes.



Circumstances change from paddock to paddock and region to region. It's knowing what you are working with that helps improve your decision-making process.





Cotton growers have been at the forefront of the agricultural push to get more from each drop and to boost water efficiency so that they can boost yields while reducing inputs.

Cotton's average irrigation requirement is 6-7 megalitres per hectare (but actual usage varies from region to region, and season to season), and that compares very well to many other crops.

Long-term monitoring shows the cotton industry's significant improvements in water efficiency over time. Water-use productivity by Australian cotton growers improved by 52% since 1997.

The latest industry research shows these trends have continued and that Australian growers have continued to significantly increase yields and decreased irrigation inputs. NSW DPI, in partnership with the Cotton Research and Development Corporation (CRDC), has been monitoring water productivity in irrigated cotton over the past three decades. This shows that:

- There has been a 97% increase since 1992 in the number of 227kg bales of cotton lint produced per megalitre of water, meaning growers are using just about half the water they used to, to produce each bale.
- The industry's Whole Farm Irrigation Efficiency has significantly improved and is now 81% compared to 57% in the late 1990s, indicating more water than ever is being used by the crop instead of being lost on-farm.

Research into water use in the industry has continued and confirms continual improvement in water use efficiency, increasing yield while using less water.

The Australian cotton industry has achieved a steady increase in yield from less water over time, meaning more cotton fibre can be produced using less water per hectare than ever before.

Leading cotton producers can now grow nearly two 227kg bales of cotton per megalitre of water – almost double the industry average of a decade ago.





Managing Water Pollution from Urban Areas



Managing urban run-off is an important part of looking after the health of our local waterways and ultimately the Great Barrier Reef.

Urban areas cover less than 1% of the Great Barrier Reef catchment. Yet stormwater run-off from urban and industrial land use and wastewater treatment plant releases contribute up to 7% of the dissolved inorganic nitrogen and close to 2% of the sediment that flows into the Reef.

The Queensland Government's Queensland Reef Water Quality Program (QRWQP) invests significantly into programs that support local councils and industry to manage excess nutrients and sediment from urban areas flowing into waterways.

The Urban Water Stewardship Framework (framework) assists councils to assess and report on the level of practice applied to key aspects of their urban water management practices in relation to water quality risk.

Additional funding from the Australian Government means the framework will now expand to councils beyond the Reef regional waterway partnership regions, and that assessment workshops are held in person with the findings presented to the executive leadership team of the participating council.



Stormwater run-off from urban and industrial land use and wastewater treatment plant releases contribute up to 7% of the dissolved inorganic nitrogen and close to 2% of the sediment that flows into the Reef.

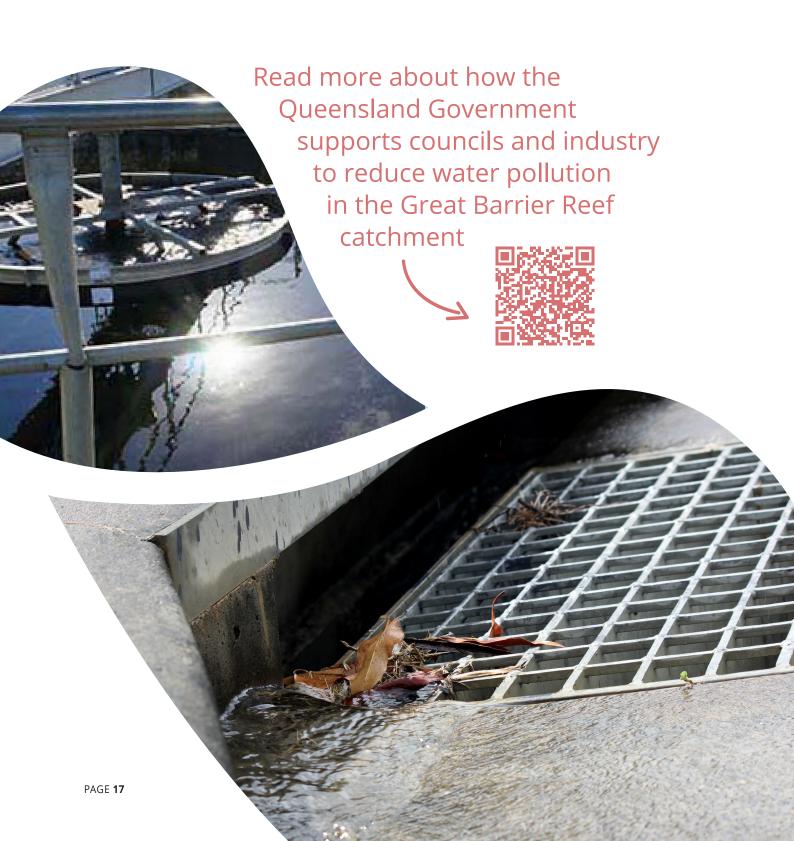


Assessments are carried out biennially, with 13 local governments across the Great Barrier Reef catchment participating in previous years. Two councils in the Fitzroy put up their hand for the 2024/25 assessment round.

A new Point Source Information Portal also provides detailed data on sewage treatment plants, aquaculture farms and wastewater management practices.

You can download reports on point source activities, loads and leading management practice and explore point source activities for particular regions or locations via the interactive database.

The portal was developed in a collaboration between Griffith University and the Queensland Government with QRWQP funding.



Experts Agree on Science for Reef Protection:



Scientific Consensus Statement

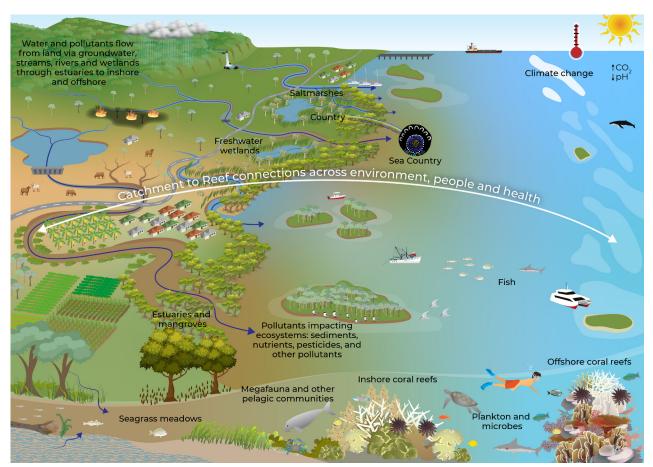
The most comprehensive and rigorous review about the effects of land-based activities on Great Barrier Reef water quality and ecosystem condition was released in August 2024: the 2022 Scientific Consensus Statement.

The Statement brings together the latest scientific evidence to understand how land-based activities can influence water quality in the Great Barrier Reef, and how these influences can be managed.

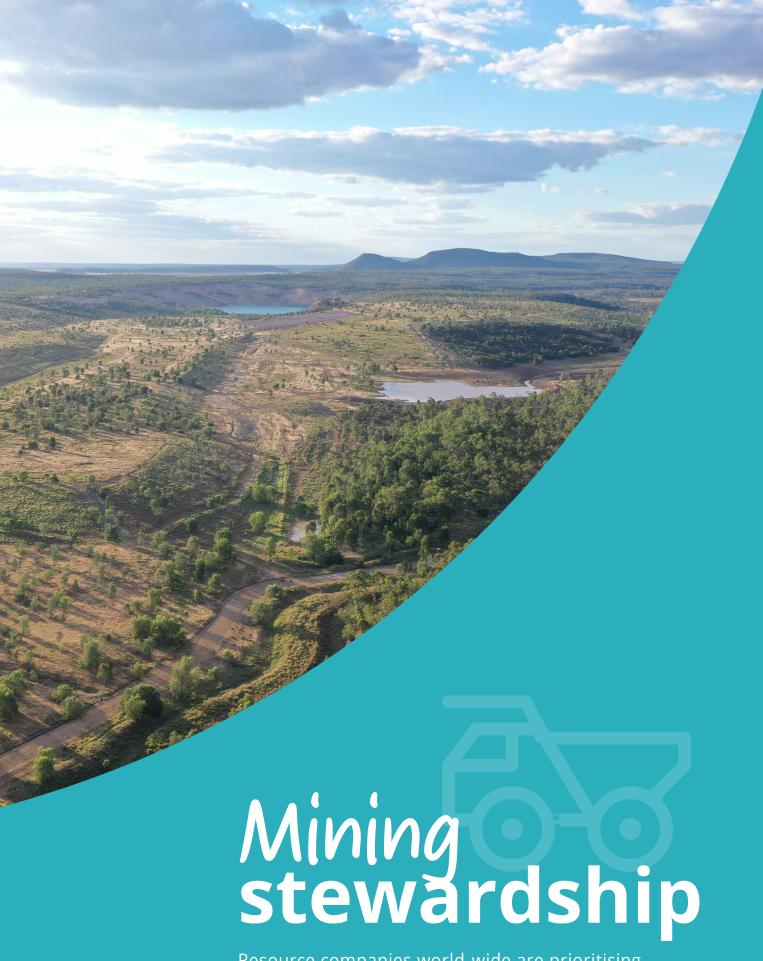
Led by C2O Consulting and funded by the Australian and Queensland governments, the Statement involved more than 200 experts including 78 authors and 69 reviewers from Australia and overseas. The outputs are based on evidence from over 4,000 publications.

Based on the evidence, 35 scientific experts reached consensus on eight overarching conclusions, including that historical and continuing land management and catchment modification impair Great Barrier Reef water quality through extensive vegetation degradation, changed hydrology, increased erosion, and expansion of fertilised land uses, urban centres and coastal developments.

The Statement, including its detailed conclusions, is available at www.reefwqconsensus.com.au



Conceptual diagram for the values, condition and drivers of the health of the Great Barrier Reef. Prepared by C2O Consulting and Hodge Environmental for the 2022 Scientific Consensus Statement.



Resource companies world-wide are prioritising sustainable practices for better business and communities. In the Fitzroy Basin there are a number of operators leading the way.

The Importance of Water Recycling + Reuse in QLD's Coal Mining Industry

Water is essential for the coal mining industry, especially in Queensland, where mining operations are extensive, and water scarcity is a real challenge. The industry relies on water for various processes, including dust suppression, mining operations, and resource processing. This heavy reliance, combined with other water users, presents both risks and opportunities for local water resources, particularly in areas like the Fitzroy Basin, which can experience prolonged periods of low rainfall. The mining sector has the expertise and capacity to drive sustainable practices, such as water recycling and reuse.

At Anglo American's steelmaking coal operations across the Fitzroy Basin, we've been proactive in implementing water recycling and reuse initiatives to contribute nature-positive outcomes for local water resources. Since 2020, we've increased our reuse and recycling from 50% to 65% of total water use. In 2024 alone, this led to a reduction of 1,023 million litres of freshwater withdrawal. A number of benefits for our operations include:

- **Reduction in freshwater consumption**: By recycling and reusing water, we significantly reduce our reliance on external freshwater sources. This not only eases pressure on local water resources but also lowers our usage costs and allows us to return surplus water to the market for other beneficial uses.
- Future cost savings: Implementing water treatment technologies and increasing reuse opportunities has helped us reduce stored mine water. This is crucial because this stored water typically need to be treated at mine closure, which can be complex and costly.
- **Enhanced resource efficiency:** Maximising the use of all available water resources has improved our overall operational water efficiency across our Central Queensland operations. Our sustainable water management practices serve as examples for other parts of our business and potentially externally, showcasing reuse and recycling options, learnings, and improvements.



Since 2020, we've increased our reuse and recycling from 50% to 65% of total water use. **AngloAmerican**

Environmental Benefits: Effective water management strategies reduce our ecological footprint and promote sustainable mining practices. By implementing comprehensive water recycling systems, we significantly mitigate risks associated with water scarcity, pollution, and habitat destruction.

Several innovative technologies and case studies highlight the potential of water recycling and reuse in the mining industry:

- Reverse Osmosis (RO): Our RO plant at Capcoal employs a widely used technology that effectively removes contaminants from saline mine-affected water, making it suitable for reuse in mining operations.
- Closed-loop systems: These systems recycle water internally, minimising discharge and environmental impact. Continuous monitoring and optimisation using advanced sensors and



Protecting Waterway Health: A Pecade Long Partnership



Water is a vital resource with significant social, cultural, environmental and economic values. At BHP Mitsubishi Alliance (BMA) comprehensive water management is prioritised to safeguard waterway health and achieve set context based water targets. Context based water targets address water challenges shared by BMA and other stakeholders in the regions where they operate. They focus on improvements in water resource management such as water reuse and consumption and effective mine water release management.

Recognising the potential impact of mine water release into the receiving environment, BMA has collaborated with Central Queensland University (CQU) over the past decade on the Agua Eco Health Program (AEHP). This initiative has collected and analysed water quality, sediment and biota data up and downstream of BMA operations in the Bowen Basin in Queensland. The partnership has identified and unlocked valuable insights and trends by analysing extensive environmental data collected over the 10 years. This AEHP initiative comprehensively analyses all available historical environmental data collected and provides:

- Valuable insights and trends into the potential impact of mine water release on the surrounding environment both at individual mine and catchment levels over the period.
- The development of effective, economical and ecologically sustainable monitoring related to the release of mine water to safeguard aquatic ecosystems.

A long-term dataset, facilitating future research and collaboration with government agencies with far reaching benefits extending beyond the Bowen Basin region and BMA operations as an input into the mining industry's best practice in Australia.

The physical, chemical and habitat variables were collected and measured according to the Queensland Government's Monitoring and Sampling Manual: Environmental Protection (Water) Policy 2009 (2018). Habitat characteristics including vegetation and substrate composition were also recorded using the standardised

National River Health Program method within the Australian Rivers Assessment System (AUSRIVAS) sampling and processing manual.



The partnership has unlocked valuable insights and trends... Over the past 10 years.





CQU and AUSRIVAS trained experts in the analysis of aquatic macroinvertebrates, Alison Craig (left) and Geeta Gautam Kafle (right) identifying macroinvertebrates from BMA sites in the laboratory. Both have worked on this project for over a decade.



A mayfly nymph of the family Caenidae, Order Ephemeroptera, from a BMA downstream sampling site. This order is indicative of good water quality.

Recent AEHP work is designed around initial data visualization from the dataset collected between 2011 and 2021 including graphing all patterns against the environmental compliance requirements, guidelines and water quality objectives for BMA operations. Multivariate statistical techniques including Principal Component Analysis, that highlights correlations in sources and trends in the site results, and Multidimensional Scaling (MDS), were used to identify and visualise the patterns in the data set. BMA recognises the importance of this work and is committed to minimising environmental impacts and protecting waterway health in the Fitzroy Basin.

BMA acknowledges the expertise and collaboration of Central Queensland University and other institution professionals and researchers in analysing historical data, providing guidance and informing strategies that protect waterway health for the broader region.





Citizen science & partnerships

Waterway Stories: Connecting Community & Waterways Through Storytelling

Fitzroy Partnership for River Health (FPRH) has consistently championed initiatives that foster environmental stewardship and community engagement within the Fitzroy Basin. One such endeavor is the *Waterway Stories* project, designed to deepen the connection between the local community and their waterways.

By documenting personal experiences, historical accounts, and cultural insights, the initiative aims to cultivate a profound appreciation for these aquatic ecosystems. This storytelling approach not only educates but also inspires individuals to participate actively in preserving and enhancing waterway health.



Community involvement is central to the success of Waterway Stories. By encouraging residents to share their unique perspectives, experiences and anecdotes, the project fosters a sense of ownership and responsibility toward local waterways. This participatory model aligns with FPRH's broader mission to provide comprehensive and accessible information about river health, empowering the community to make informed decisions and take meaningful action.

Waterway Stories is an effective way to bridge the gap between science and community engagement. While data and monitoring reports provide essential insights into water quality and ecosystem health, personal stories make these issues more relatable and tangible. By highlighting firsthand experiences, the initiative fosters a sense of responsibility and pride among residents, encouraging them to take an active role in protecting their waterways.



Spending time at this waterway, it is easy to forget you are in CQ.

– Participant, Mackenzie River





When I was a kid it was quieter here. We would swim with the turtles and flow down the rapids when the creek ran high. It's very busy here now but I think people are mostly respectful of it as a special place.

– Participant, Byfield



This place holds a special memory for me. Its very calming and peaceful.

- Participant, Gracemere

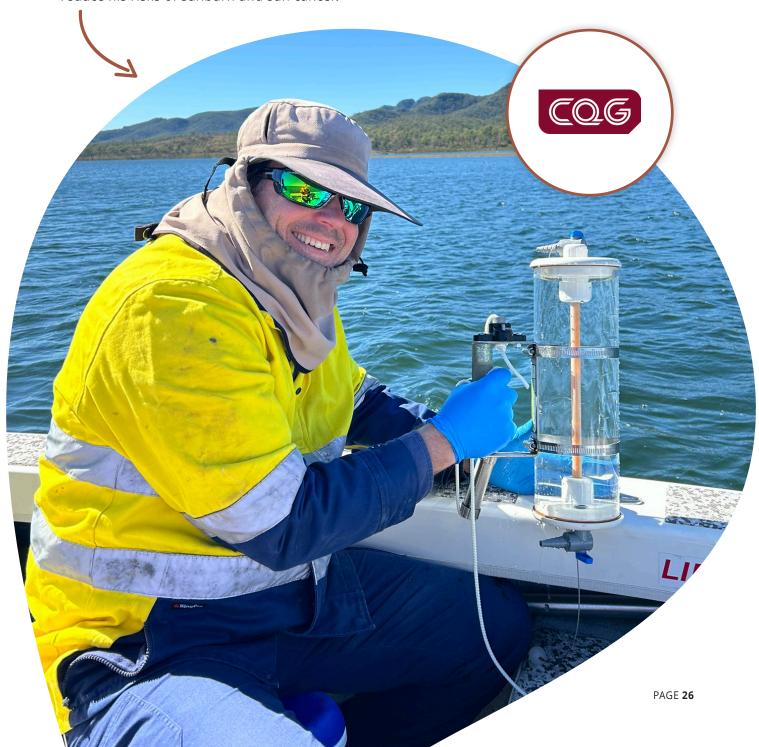




CQG Consulting's Team can often be seen out and about on or adjacent to waterways in our region conducting sampling and aquatic ecology surveys.

Our Queensland weather presents risks for sun cancer and heat exhaustion so it is important for field staff to consider risks prior to sampling and follow the slip, slop and slap rule.

Pictured here is one of CQG's environmental scientists, Michael Whitehead, who slipped on his long sleeve shirt, slopped on sunscreen, slapped on a hat and his wrap around safety sunglasses to reduce his risks of sunburn and sun cancer.





Our Partners

We recognise our partners as being the change that is needed for Fitzroy Basin's water future;



















































Get in touch to find out more





admin@riverhealth.org.au



FitzroyPartnership4RiverhHealth



Fitzroy Partnership for River Health



Level 1, 80 East Street, Rockhampton Qld 4700

