



HEALTHY WATERS
PARTNERSHIP
dry tropics

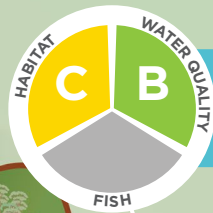
TOWNSVILLE DRY TROPICS
**Waterways
Report
Card**
2026

How healthy are
the places we swim,
fish and explore?

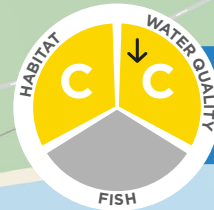
Reporting on data collected 2024-2025

Overall Results

The Healthy Waters Partnership for the Dry Tropics acknowledges the Wulgurukaba, Bindal, Nywaigi, and Manbarra people as the Traditional Custodians of the land and sea country that is valued by all who have contributed to this Report Card.



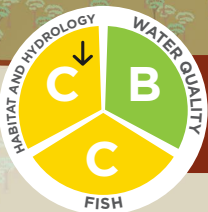
Black Basin Estuarine



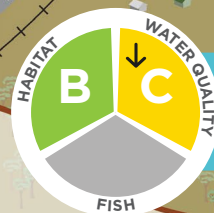
Halifax Bay Inshore



Black Basin Freshwater



Ross Basin Freshwater

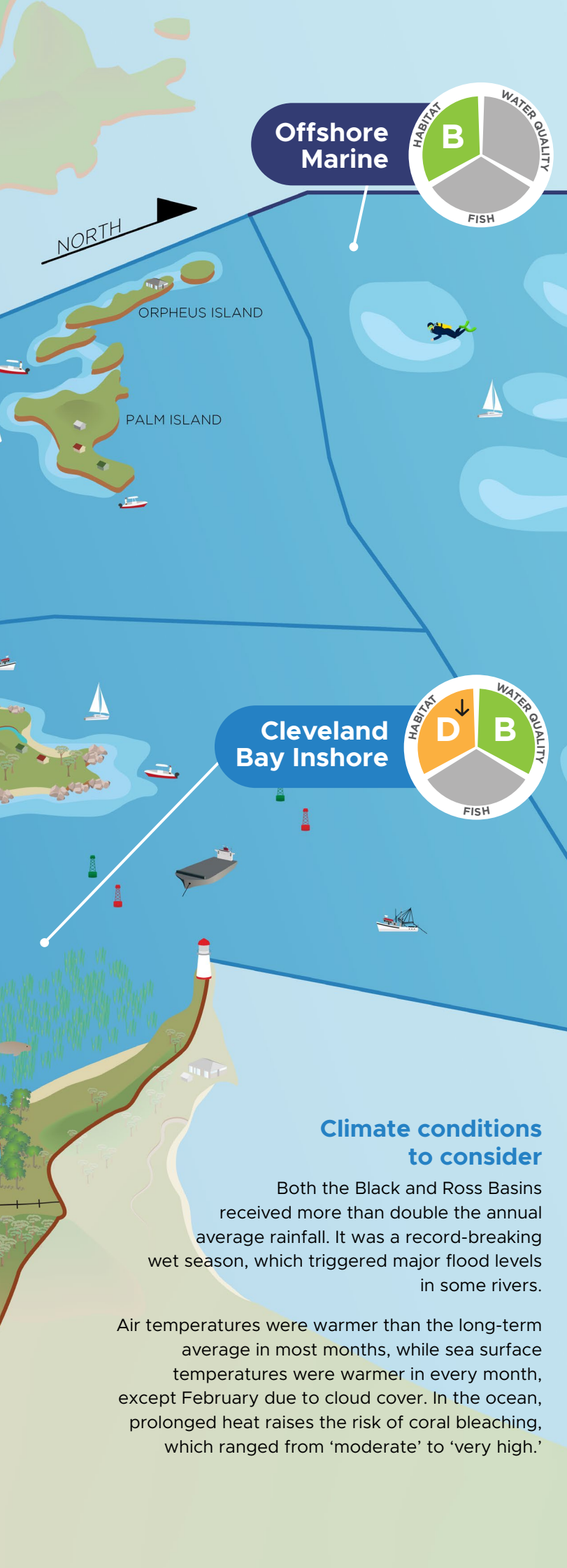


Ross Basin Estuarine



Go beneath the surface and explore data in the Technical Report. See the confidence measure for each of the grades.

Scan me!



A one-stop shop for waterway health

The Waterways Report Card brings multiple data streams together into a single, science-backed document that reveals the state of Townsville's rivers, creeks, and coasts, from the catchment to the Great Barrier Reef. The data shows how our waterways are changing, and where action will have the greatest impact.

This report is informed by data collected by our Partners from July 2024 to June 2025.

A	Very good
B	Good
C	Moderate
D	Poor
E	Very poor
	Not enough information

Since last Report Card:

- ↑ Grade has improved
- ↓ Grade has declined

What gets monitored

Water quality	Hydrology	Fish
	Weirs and dams	
Habitat		
Riparian vegetation	Wetlands	Mangroves and Saltmarsh
Coral	Seagrass	

As you flick through the Report Card, keep an eye out for bottles. These show the pressure of litter at clean-up locations, which may change from year to year.

Very low	Low	Moderate	High	Very high
Litter pressure				

Ross Basin Freshwater (upstream)

What gets monitored



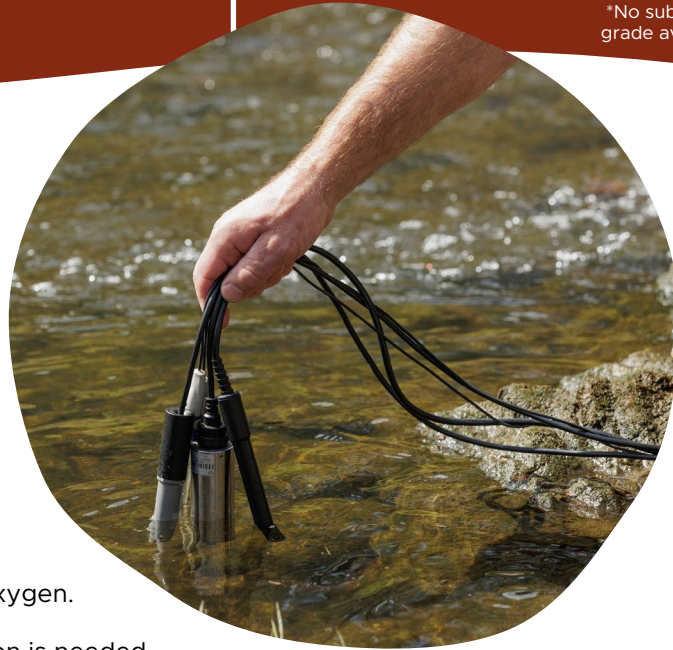
*No sub-basin
grade available

A first look at Stuart Creek

For the first time, we have an important glimpse of water quality in the Stuart Creek sub-basin, helping to fill a critical data gap.

The results show a waterway under pressure, with a 'very poor' grade driven by excess nutrients and low oxygen levels. Similar pressures continue to be seen in the Bohle River, which recorded 'poor' water quality for the seventh year in a row, also linked to high nutrient levels and low dissolved oxygen.

These insights help pinpoint where action is needed most. We're working to secure additional data in the Stuart Creek sub-basin to build a more complete picture. With Partners and stakeholders, future efforts will focus on targeted, on-ground actions to improve the health and resilience of these waterways.



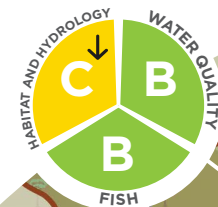
On-ground actions are already underway across the Townsville Dry Tropics. We celebrate our Partner's efforts through 'Stories of Stewardship.' Dive in.



Bohle River freshwater sub-basin



Lower Ross River freshwater sub-basin



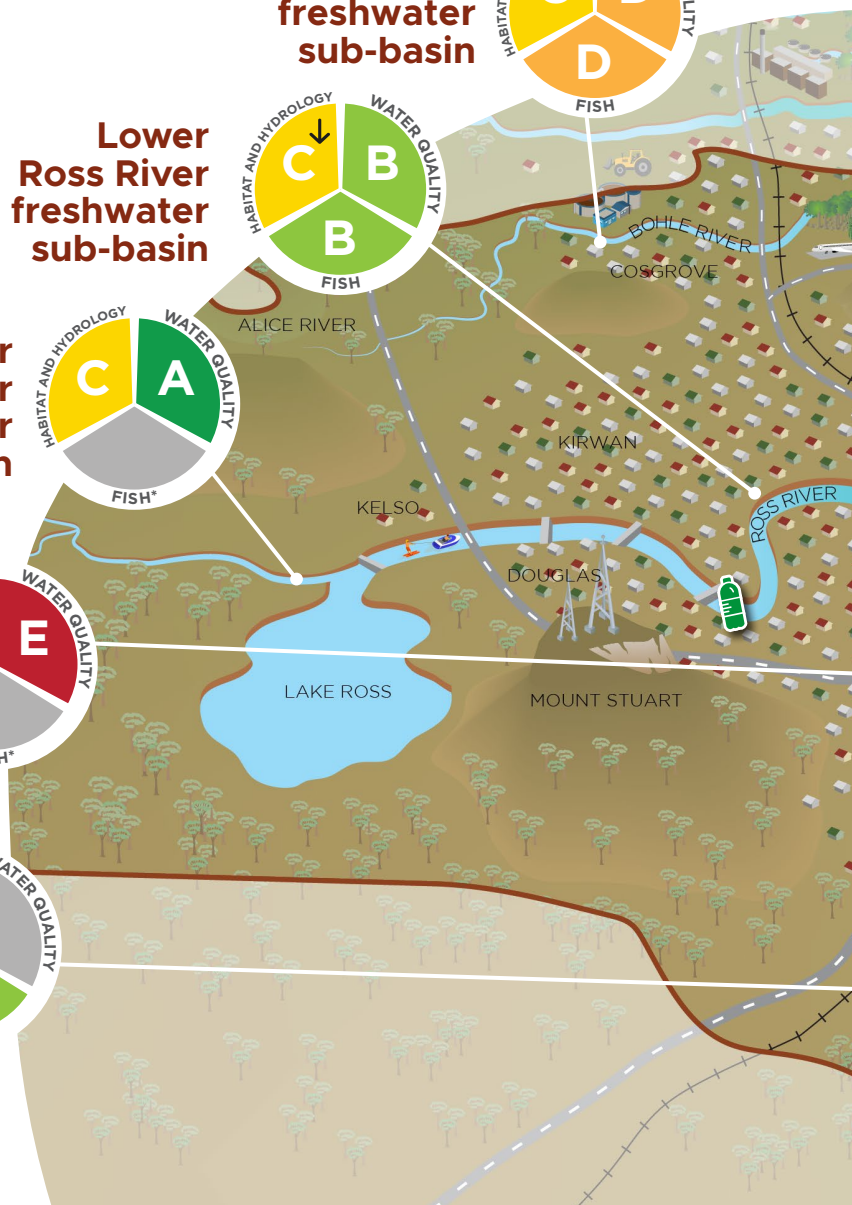
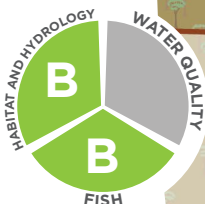
Upper Ross River freshwater sub-basin



Stuart Creek freshwater sub-basin



Alligator Creek freshwater sub-basin



What gets monitored



Ross Basin Estuarine (downstream)

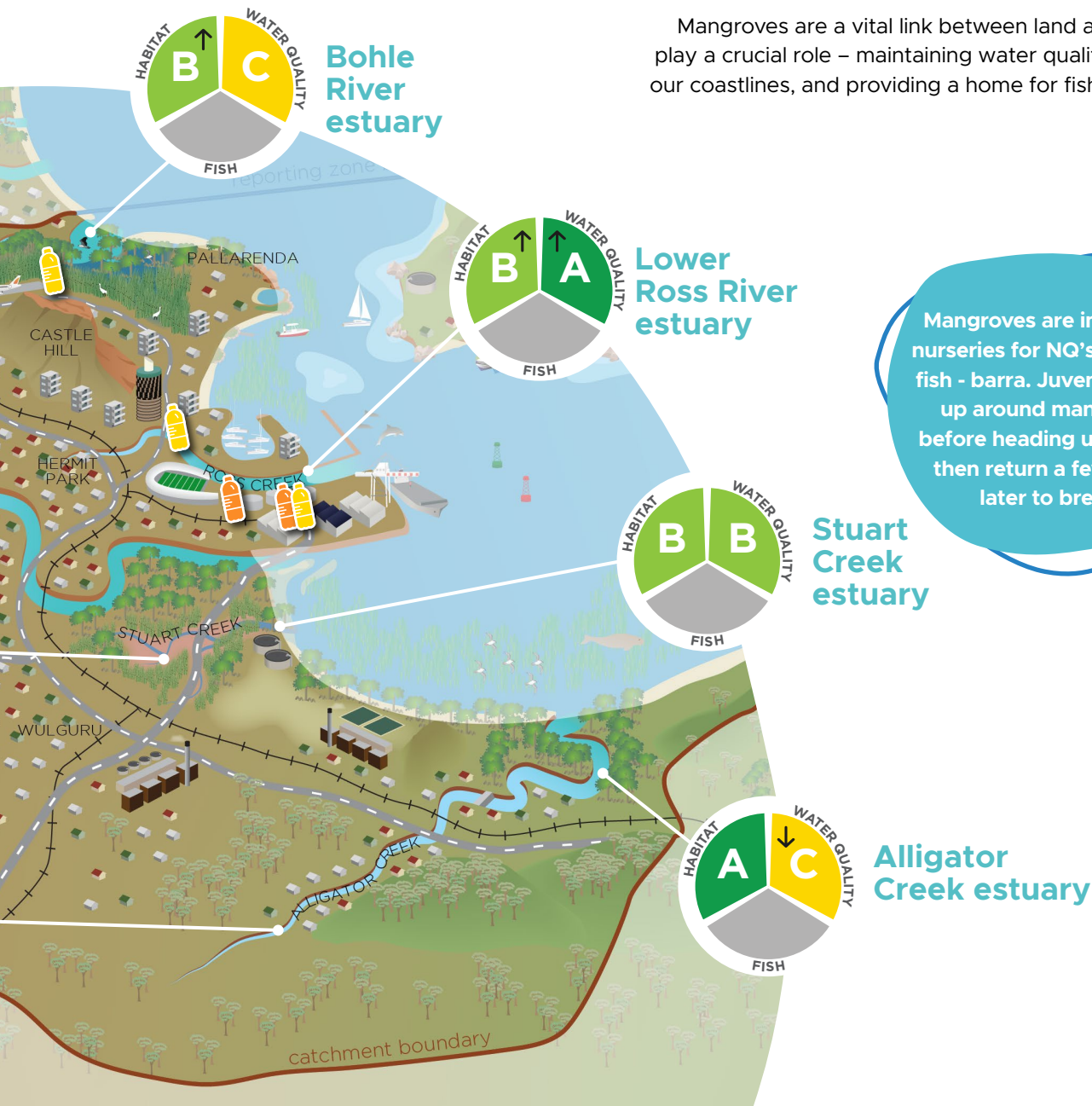
Growing mangrove insights from shore

We're building a clearer picture of mangrove health in the Ross Basin, with a new data stream adding fresh insights into these vital coastal habitats.

Through Earthwatch Australia's MangroveWatch citizen science program, shoreline surveys in the Bohle River, Lower Ross River and Alligator Creek, looked at canopy cover, habitat structure and signs of impact to strengthen our understanding of mangrove condition.

These new insights saw grades lift in the Bohle and Lower Ross River sub-basins, and complement satellite data that shows how habitat areas have grown or shrunk over time.

Mangroves are a vital link between land and sea. They play a crucial role – maintaining water quality, protecting our coastlines, and providing a home for fish and wildlife.



Mangroves are important nurseries for NQ's favourite fish - barra. Juveniles grow up around mangroves before heading upstream, then return a few years later to breed.



Black Basin Freshwater (upstream)

What gets monitored



*No sub-basin grade available

Reeling in fish health at a finer scale

We've examined fish health data to scale insights from the basin level to the sub-basin, when three or more sites were sampled. This deeper dive highlights clear differences between waterways to show where fish communities are thriving, and where they're under pressure.

To build an even clearer picture, new approaches are on the horizon. Emerging eDNA monitoring will help detect fish by the traces of skin, mucus, faeces and urine they leave behind, opening the door to more detailed, local insights across the region.

Fish health is graded by looking at the balance of native and non-native fish species. Healthy systems support a diverse mix of native species, while degraded waterways are often dominated by invasive fish, like tilapia.



Spot an invasive fish?
Report it to Biosecurity
Queensland. Take a photo
and share the details.
(Only report tilapia if it's a
new outbreak.)



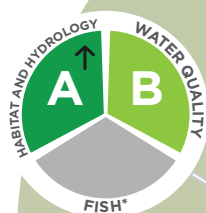
Crystal Creek freshwater sub-basin



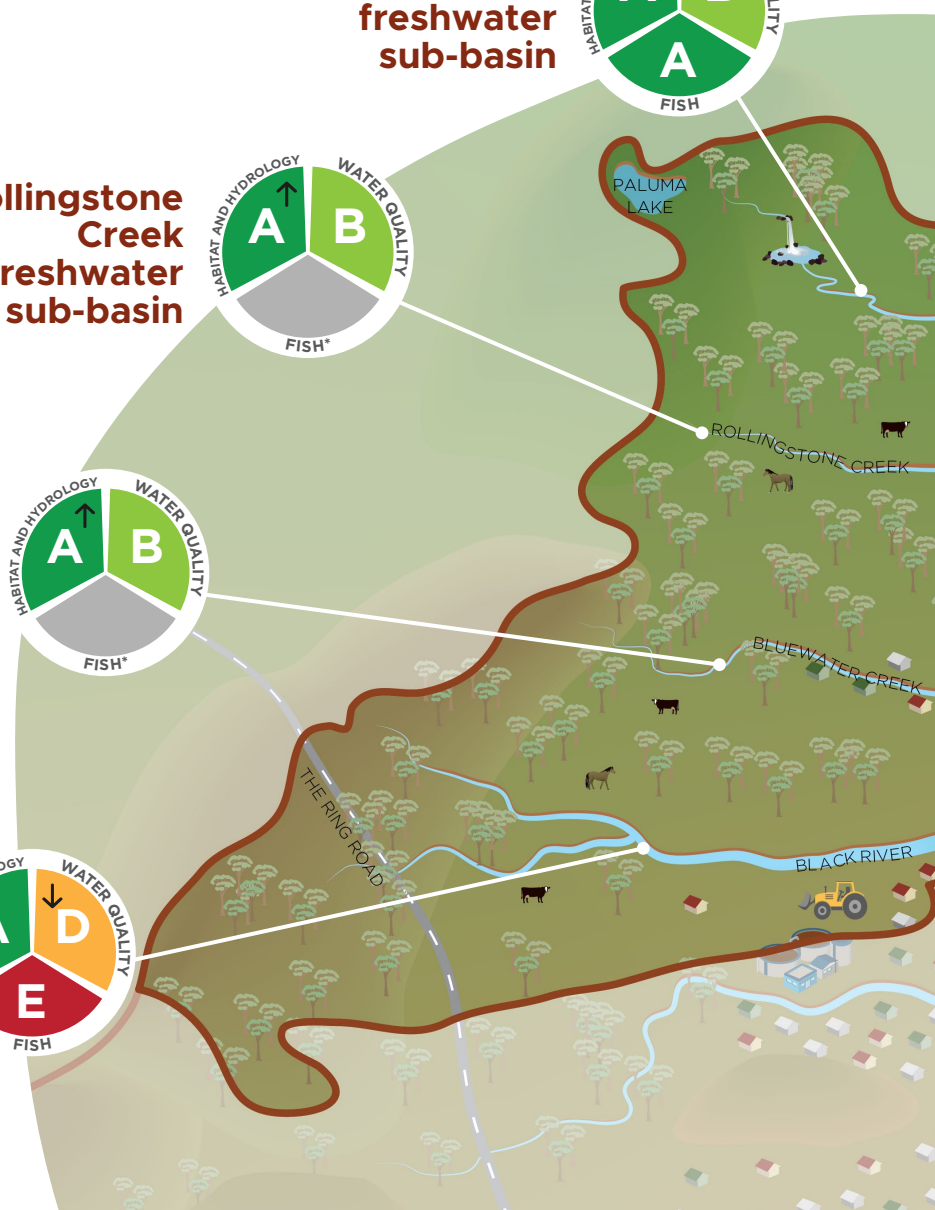
Rollingstone Creek freshwater sub-basin



Bluewater Creek freshwater sub-basin



Black River freshwater sub-basin



What gets monitored



Black Basin Estuarine (downstream)

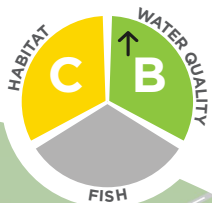
Brighter signs for estuarine waterways

Water quality is measured by looking at nutrients, turbidity, and oxygen levels. Together, they help tell the story of waterway health.

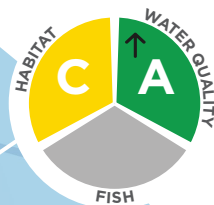
Across all Black River Estuarine sub-basins, water clarity improved a grade. Clearer waters mean less sediment or organic matter in the water, which block sunlight and affect the growth of aquatic plants. Dissolved oxygen levels also improved, supporting healthier conditions for life in our waterways.

At Crystal Creek, reduced nutrient levels saw water quality improve. While nutrients are essential, too many can fuel algal growth, which lowers oxygen, making it hard for fish and other aquatic life to survive.

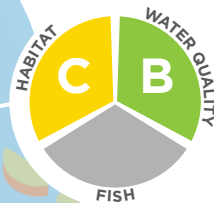
These positive trends across the Basin point to more resilient estuaries, supporting the outdoor lifestyle that Townsvillians cherish.



**Crystal
Creek
estuary**



**Rollingsstone
Creek
estuary**



**Bluewater
Creek
estuary**



**Black
River
estuary**

Water quality grades are assessed against set objectives. Because the Black Basin has fewer urban pressures than the Ross, it is measured against stricter targets, meaning grades can differ between the two basins, even when measurements are the same. These objectives also vary across marine zones.



Halifax Bay

What gets monitored



*Results are graded at the Bay level

Where does our litter go?

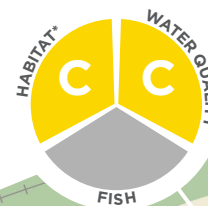
Volunteers, community groups and local businesses helped clean up 24 sites this year to understand how much litter pressure our region is facing and where it is highest.

The east coast of Orpheus Island stands out, with more than half the sites recording a 'high' pressure. Most of this debris is considered to have washed ashore from the sea - a reminder that litter entering our stormwater drains and waterways doesn't disappear, it simply travels elsewhere.

Litter data is entered into Tangaroa Blue Foundation's Australian Marine Debris Initiative Database. Volunteer events are made possible by the ReefClean program, funded through the Australian Government's Reef Trust.



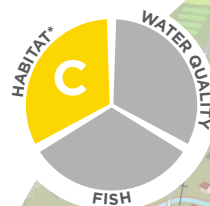
Midshelf waters



Open coastal waters



Enclosed coastal waters



Lend a hand to reveal litter hotspots and stop rubbish before it enters our waterways. Join the Townsville Environment and Volunteering Hub on Facebook to find out when clean up events, and other gigs, are happening.



What gets monitored



*Results are graded
at the Bay level



Cleveland Bay

Coral bleaching leaves its mark

Changes across coral reefs in Halifax and Cleveland Bay reflect impacts from the 2024 mass bleaching event. Bleached corals are still alive, and during surveys are recorded as live corals. The full impacts are only known when researchers return to see if corals recovered or died following bleaching.

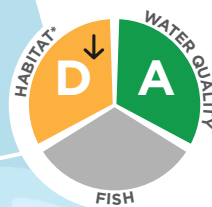
Most reefs are showing signs of stress, with nine out of ten surveyed reefs recording 'poor' or 'moderate' coral cover. Pandora North stood out as the exception, maintaining a 'very good' and stable result.

Encouragingly, there are early signs of recovery.

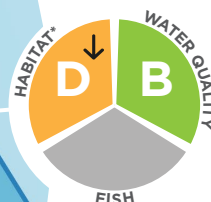
Juvenile coral numbers, key to reef regrowth, improved at Geoffrey Bay and Pandora North.

These young corals offer hope, helping reefs rebuild after disturbances when conditions allow.

Coral isn't the only marine habitat in Cleveland Bay. Seagrasses are our guardians of the Bay – find out why in this interactive, digital storytelling experience.



**Open coastal
waters**



**Enclosed
coastal waters**

Magnetic Island

What gets monitored



Freshwater



Estuarine



Coastal waters



Filling data gaps on Maggie

Citizen science champions are stepping up to care for Yunbenun-Magnetic Island's stunning coastal areas. From checking waterway health to joining clean-ups, surveying coastal wetlands and observing shorebirds, their efforts are building a clearer picture of how the island's ecosystems are faring.

Some data could help fill gaps in the Report Card, while other findings will highlight vulnerable sites for on-ground action and enhance protection for iconic coastal wildlife.

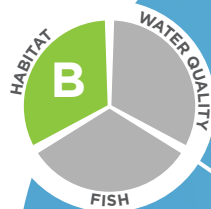
Volunteers aren't just gathering data. They're building skills, confidence, and a deeper connection to the island they love.

The Coastal Stewardship Project involves several members of the Partnership, and is delivered with the Great Barrier Reef Foundation and the Australian Government.

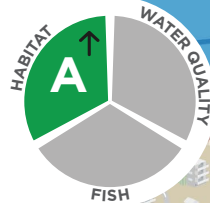


What do the grey gaps mean?
Grey indicates there's not enough suitable data to calculate a grade. We're committed to finding and using the best possible data, and welcome your input. We're also collaborating on several projects to ensure data collected through citizen science programs can be integrated into the Report Card.

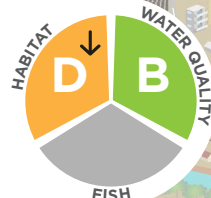
Magnetic Island freshwater



Magnetic Island estuarine



Magnetic Island coastal waters*



*This sub-zone is included in Cleveland Bay results, with Habitat graded at the Bay level



What gets monitored



Offshore Marine

Offshore reefs hold steady

Further from the coast, reefs tell a more stable story. These sites are monitored through the Australian Institute of Marine Science's Long-Term Monitoring Program, where scientists spend more than 120 days at sea each year surveying up to 130 reefs along the length of the Great Barrier Reef.

For four decades, divers have returned to the same spot at each reef surveyed, to build a powerful picture of change over time.

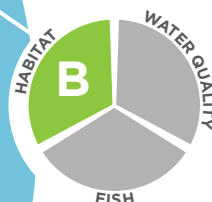
Around Townsville, offshore reefs have maintained 'good' health for the fifth year in a row. Promisingly, all sites recorded 'very good' levels of juvenile corals, a strong sign of recovery potential.

Improvements continue at John Brewer Reef, which is bouncing back following a past crown-of-thorns starfish outbreak.

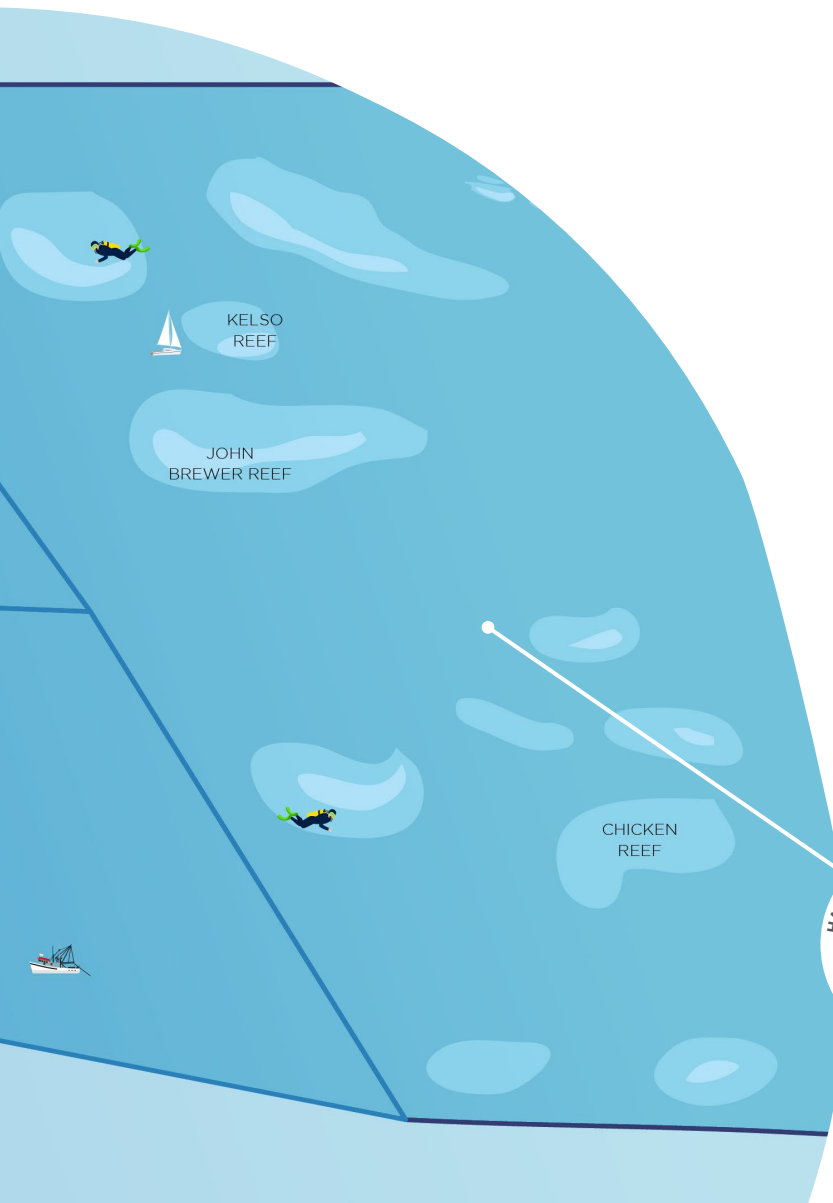
Chicken Reef, April 2025
Photo: AIMS | LTMP



Crown-of-thorns starfish aren't the politest dinner guest.
When eating, their stomach is pushed out the mouth, and coral is digested on the outside. They're also big eaters. An adult starfish can eat up to 10 square metres of coral in a year!



Offshore Marine



Urban Water Stewardship Framework

As the largest urban centre in the Great Barrier Reef catchment, Townsville concentrates population, infrastructure, and development in one place. This means that, despite occupying a relatively small area, it can act as a high-intensity pollution hotspot with significant local impacts if not effectively managed.

That's where the Urban Water Stewardship Framework comes in. It supports councils, and the development and construction industry to evaluate urban water management against best practice, identify opportunities for improvement and work together toward better water quality outcomes.

How is Townsville tracking?

In the most recent assessment (2024-25), Townsville City Council received a 'B.'

The grade shows Townsville is achieving best practice in urban water management, with opportunities to further improve and innovate. This corresponds to a low to moderate risk to urban water quality.

Since the previous review in 2023, the score has increased slightly; however, the overall grade remains the same.

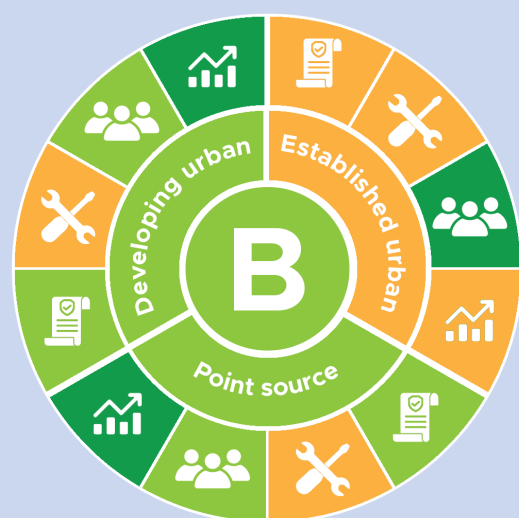
Improvements were seen in the planning and design of stormwater infrastructure, as well as in monitoring and responding to runoff impacts in 'Developing Urban,' which focuses on managing erosion during construction and development. Progress was also made in reducing environmental impacts through monitoring and reporting under 'Point Source' (wastewater management), resulting in an 'A: Above Best Practice.' The Council maintained its 'A' for collaboration and capacity building with industry and community, supporting strong pollutant management in 'Established Urban' areas.

The Urban Water Stewardship Framework, developed by the Queensland Department of the Environment, Tourism, Science, and Innovation (DETSI) under the Reef 2050 Water Quality Improvement Plan, is an evaluation tool to benchmark urban water management practices in a standardised way to identify opportunities for improvement and investment.

It assesses three key areas:

- Developing Urban (construction site erosion / sediment control)
- Established Urban (stormwater treatment in built areas)
- Point Sources (wastewater treatment plant operations)

Performance is evaluated through a series of workshops for each council in Reef Report Card regions, which the Healthy Waterways Partnership facilitates in the Townsville Dry Tropics.



 Policy, planning and governance

 Infrastructure management and maintenance

 Social approaches

 Monitoring and evaluation

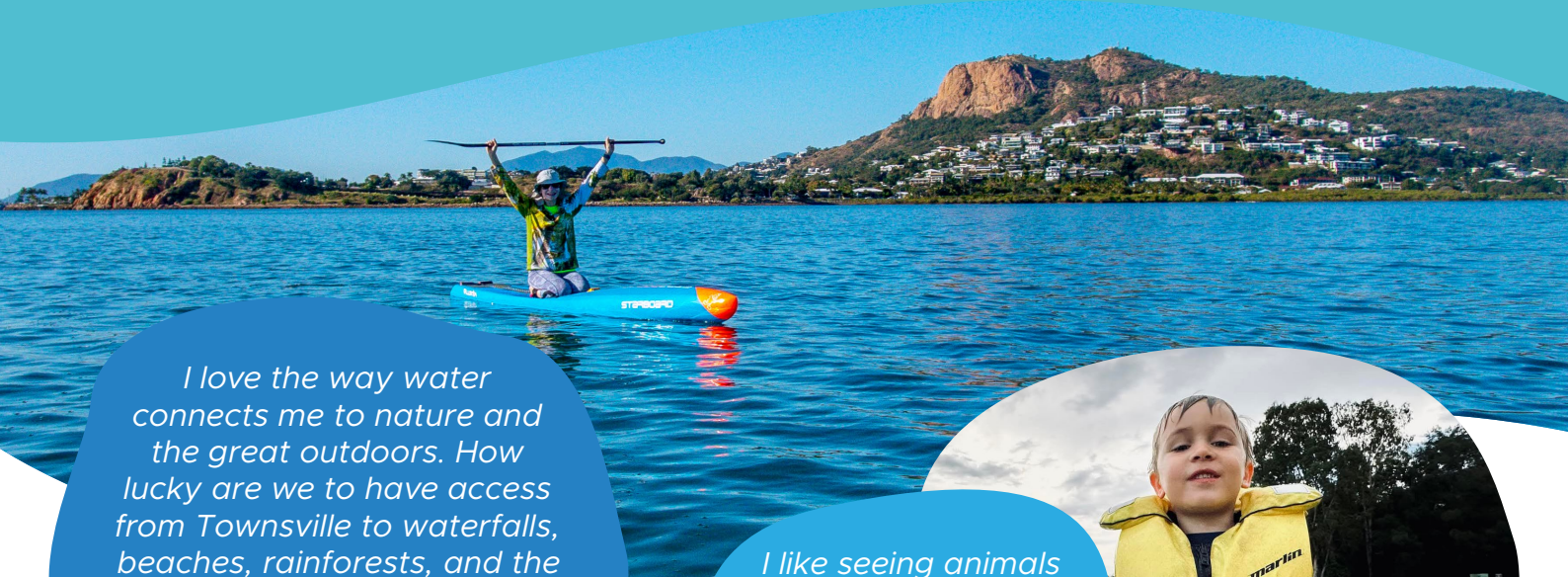
A Above best practice

B Current best practice

C Minimum standard

D Superseded standard

Our town, our waters



I love the way water connects me to nature and the great outdoors. How lucky are we to have access from Townsville to waterfalls, beaches, rainforests, and the underwater aquarium that is the Reef?

Miruna Palosanu



I like seeing animals that live in the water and on shore, and I like swimming and paddling too.

Lockie



Days like this - out fishing with my son - remind me just how special it is to call this place home. It's more than just the scenery; it's the joy of sharing simple moments, connecting with nature, and spending real family time together.

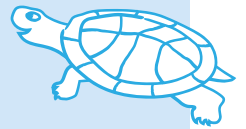
Adam Douglas

Where we spot wildlife

**The Strand
Ross River**

**The Town Common
Magnetic Island**

The Great Barrier Reef



Where we wet a line

Bohle River

Ross River

Pallarenda

Northern Beaches

The Great Barrier Reef



From catchment to Reef: partnering for healthy waterways

The Healthy Waters Partnership for the Dry Tropics brings together a diverse network of partners from business, industry, research, education, community, and all levels of government who care for waterways in our region.

Our annual Report Card pools data and knowledge from many sources, providing a trusted snapshot of waterway health. It's a crucial tool that informs managers about water quality that flows from the catchment to the Reef.

Together, we're building a shared understanding of our rivers, creeks, and coasts, and driving collective action to improve their health and resilience, while empowering the community to be part of the solution. We are one of five Regional Report Card Partnerships working along the Great Barrier Reef catchment.

Be part of the solution!

There are plenty of ways to get involved and support our waterways.

Join a local clean-up, lend a hand at planting events, or take part in citizen science gigs. You'll find volunteer opportunities and citizen science programs on our website.

Shaping the next generation? Explore our classroom resources, where students turn Report Card data into real-world action for our rivers, creeks, and coasts.

Want to go further? Become a member of the Partnership and be part of the collective effort to improve the health of our waterways.



**Wet Tropics
Waterways**



**HEALTHY WATERS
PARTNERSHIP**
dry tropics



**HEALTHY RIVERS TO
REEF PARTNERSHIP**
MACKAY-WHITSUNDAY-ISAAC

fitzroy
partnership
for river health



**Gladstone Healthy
Harbour Partnership**



The record-breaking wet season

The Waterways Report Card is built on routine monitoring, so short, sharp events like floods don't always appear in the data. Impacts can pass through the catchment quickly or monitoring sites may be inaccessible.

But the start of 2025 was different. A long, record-breaking wet season meant some routine monitoring captured the effects in our waterways. While these results are averaged out across the year, a closer look reveals interesting insights.

What we saw

Turbidity, which is a measure of water clarity, spiked with the first major rainfall and continued to show strong peaks after subsequent rains. These peaks can take a few days to appear, reflecting the time it takes for sediment to move through the catchment.

Peaks also continued for an extra month than in 2024 and nearly two months longer than the wet season prior. Ongoing rainfall re-suspends existing sediment and introduces new material into waterways, prolonging murkier conditions and limiting sunlight, which affects the growth of aquatic plants and aquatic animal's ability to navigate.

In December and January, turbidity levels in the Bohle were nearly four times higher than the average at other times of the year.

What we didn't see

There are some effects from heavy rainfall that we don't measure for the Report Card, such as the large amounts of freshwater that flow into the ocean and create a low salinity "lens" over marine habitats close to the coast.

Researchers from James Cook University found this had devastating effects at Orpheus Island. Shallow coral areas in one bay lost an estimated two-thirds of their corals, while the Giant Clam Garden snorkel site saw mass die offs of the iconic clams.

This highlights another pressure facing coral reefs, adding to the challenge of recovery between disturbances.

Rain plays its part, so do we

Events like this bring both challenges and benefits. Heavy rainfall can place stress on ecosystems, with marine habitats taking time to recover. But, it can also flush out pollutants and weeds, helping to reset waterways.

By preparing ahead of the wet season, we can limit our impacts through stormwater runoff and support healthier waterways when the rains arrive.



How to help our waters



Reduce use of fertilisers and pesticides

From homes, farms, and town, chemicals can wash into our waterways.



Stay smart about septic systems

Let's keep an eye on the effectiveness of our wastewater systems.



Keep an eye on runoff

Every time it rains, pollutants get pushed off roads, factories, and farms. We can prevent and report pollution.



Get involved in creek restoration and tree planting

Trees, mangroves, shrubs, and grasses can be a waterway's best defence against runoff.



Tidy up Townsville!

Litter is a cumulative and collective challenge. Let's show our waters the love.



Become a citizen scientist

Collect data and contribute to environmental monitoring.



Minimise your carbon footprint

Use energy efficient appliances, make conscious diet choices, and walk, ride, carpool or take public transport when you can.



Fish sustainably

Follow seasonal closures, catch and size limits, and zoning rules to support healthy fisheries and ecosystems.

healthywaterspartnership.org



[drytropicshealthywaters](https://www.facebook.com/drytropicshealthywaters)



[healthy_waters_partnership](https://www.instagram.com/healthy_waters_partnership)



[healthy-waters-partnership-dry-tropics](https://www.linkedin.com/company/healthy-waters-partnership-dry-tropics)

Keeping watch on our rivers, creeks, coasts, and reefs - together



Queensland Government



Australian Government



City of Townsville



PORT OF TOWNVILLE



N Q DRY TROPICS



CSIRO



C&R Consulting



CANOE Projects inc.



Magnetic Island Community Development Association



Jet Zero



QWaLC



REEF CHECK AUSTRALIA



POWERED BY R&C



Coastal Dry Tropics Landcare Inc.



NQCC



TIDY UP Townsville



JAMES COOK UNIVERSITY AUSTRALIA



AUSTRALIAN INSTITUTE OF MARINE SCIENCE



TropWATER



TANGAROA BLUE



earthwatch AUSTRALIA



ReefMarines Foundation



Australasian Groundwater & Environmental Consultants



WILDLIFE SURROUNDS



Reef Ecologic For a better planet