



PERFORMANCE FACT SHEET

PROVEN PERFORMANCE

FULL-SCALE, REAL-WORLD VALIDATION

RegenAqua is already in operation at Australia's first full-scale macroalgal bioremediation plant in Burdekin, Queensland. Early efficacy data has shown Total Nitrogen (TN) and Total Phosphorous (TP) removal rates comparable to conventional tertiary treatment technologies.

TRUSTED RESULTS

CONSISTENT, PREDICTABLE OPERATION

Automated systems and controlled biological processes deliver stable performance across seasons – without the complexity of chemical dosing or energy-intensive machinery. Over a two-year period, nutrient and pathogen removal rates have met traditional tertiary systems. Across more than 300 data samples, Total Nitrogen, Total Phosphorus, Ammonia, Faecal Coliform and other pathogens were consistently reduced, including in dry and wet weather conditions.

KEY METRICS

>300

Data samples analysed over 2 years.
Long-term, high-frequency sampling
across variable conditions.

365 Days

Technology tested in temperate and
tropical climate performing all year
round

99%

Up to 99% ammonia and pathogen
removal.

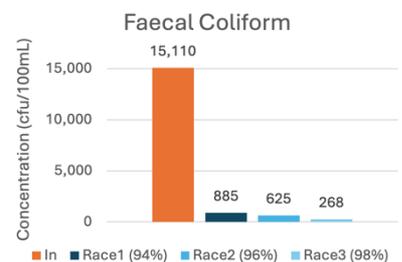
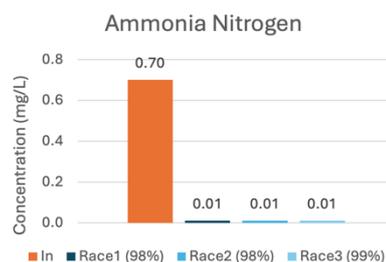
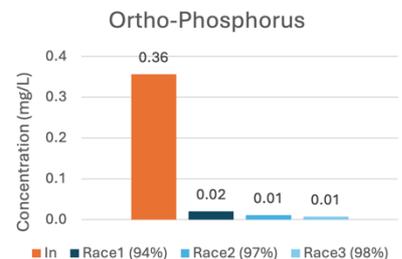
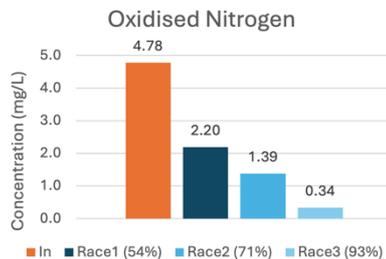
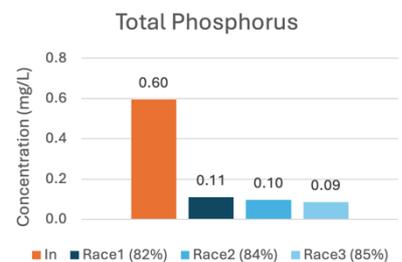
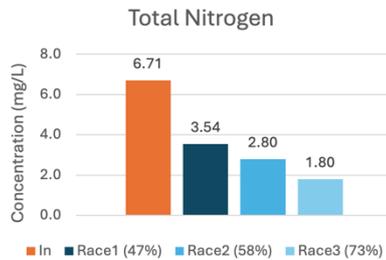
~90% TN/TP

Consistent nutrient removal
supporting discharge compliance.

NUTRIENT REDUCTION GRAPHS

The adjacent figures show the concentration reduction in Total Nitrogen, Total Phosphorus, Oxidised Nitrogen, Ammonia, Ortho-Phosphorus, and Faecal Coliform (pathogens).

Orange bars show the water quality for Macroalgal Bioreactors (MABs) inlet water, and blue bars show their outlet water. Race 1, 2 and 3 MABs have a water retention time of 5, 7, and 14 days respectively. These values represent an average of at least 120 samples collected over a 2-year period (n=120, or higher). Percentage reduction (i.e. nutrient and bacterial removal rates) is indicated in brackets.



MEASURABLE COMPLIANCE

RegenAqua supports utilities in meeting water quality discharge licenses and environmental regulations.



Year-Round Reliability

Performed consistently across all seasons, including extreme summer and winter conditions.



Stormwater Resilience

Handled high inflows during wet weather events without compromising treatment performance.



Ammonia Spike Tolerance

Effectively managed peak ammonia concentrations without compromising performance.



Low Operator Input

Delivered stable, compliant effluent with minimal hands-on intervention.

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