

## Abstract

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## Title

AlgaeWatch™ – an innovative software tool for the cyanobacterial risk management of water bodies

## Description

The water industry is extremely complex, with a range of products and services such as drinking, raw, and recycled water, dam and recreational management, and sewage services. For compliance, organisations must manage their risks across all areas. Cyanobacteria can impact the whole source to endpoint supply chain, requiring appropriate monitoring and interpretation, with focused and timely actions, for appropriate management. Manual interpretation of cyanobacterial laboratory results creates organisational risks including increased costs from incorrect and unnecessary toxin analysis, inconsistent interpretation of results, incorrect application of the NHMRC alert level framework (Guidelines for Managing Risks in Recreational Waters, 2008), reduction in revenue from closed waterways, and delayed risk management responses.

AlgaeWatch™ is a collaborative project between Jarvis Hunt Consultancy and D2K Information, providing instantaneous interpretation of laboratory (cyanobacterial and toxin analytical results), and site observational inspection data, against the NHMRC 2008 alert level framework. AlgaeWatch™ provides water professionals with actionable information through an intuitive UI, creating improved engagement and understanding of the outcomes.

The system is extensively customisable and flexible in functionality and may be configured to send automatic notifications via user-nominated platforms including email and SMS, determine overall ratings for the water body, or generate reports. Outputs are generated in several different views, including tabulated and graphed historical data, and a geo-tagged map of the water body.

Messaging can be contextualised and customised to the organisation, allowing the overlay of water-body specific risk assessment and operational procedures, creating a truly tailored algal management tool. AlgaeWatch™ collates and centralises information for readily accessible, cyber-secure and auditable information, allowing for easy integration into any quality management system. AlgaeWatch™ reduces the need for technical expertise and complexity through automating and systematising interpretation of data, improving consistency, increasing confidence in decision-making, and providing more surety for operators, boards, customers and regulators.