

Case Study

Food Processor Secures Safe, Scalable Potable Water Supply with Barrier-FB Technology



The Problem

For food manufacturers, water quality directly impacts product safety, compliance and brand trust. A leading Australian food processing company, sourcing raw water from a regional open channel, was facing increasing pressure to secure a consistent, potable water supply. Seasonal water quality issues and limited on-site resources created operational risks that couldn't be ignored.

Key Issues Identified

Seasonal Algae Spikes & High Turbidity: Water quality fluctuated significantly — especially during algae blooms — compromising consistency and safety

Strict Compliance Requirements: As a food producer, the facility needed to meet Australian Drinking Water Guidelines (ADWG) at all times

Limited On-Site Resources: A low-maintenance, fully automated treatment solution was essential to reduce labour demand

Scalability: With production growth on the horizon, the new system needed to scale easily with increasing water demand

The Solution:

Waterform Technologies delivered a turnkey Barrier-FB Potable Water Treatment Plant, engineered for reliability, scalability and compliance. Key components included:

- **Ultrafiltration (UF):**

16 x INGE Multibore UF membranes ensure absolute pathogen removal, with automatic membrane integrity testing to guarantee safe, compliant water at all times.

- **Pre-Treatment & Filtration:**

A 300-micron automatic backwashing screen filter removes coarse solids. Inline coagulation and pH correction optimise the efficiency of the UF system.

- **Chlorination & Disinfection:**

Flow paced residual chlorine dosing and continuous monitoring of chlorine, turbidity and pH ensure microbial safety and regulatory compliance.

- **Smart Automation & Remote Monitoring:**

The plant is fully automated via a SCADA-integrated PLC system with iSiteControl for 24/7 remote monitoring, performance optimisation and real-time alerts.

- **Containerised Plant Design:**

Preassembled in a 40-foot container, the system offers fast deployment, corrosion resistant materials and minimal on-site disruption

The Outcome:

The Barrier-FB system has transformed the facility's water reliability and operational performance, delivering:

- **Consistent Water Quality:** ADWG-compliant potable water now reliably supports food grade production with minimal contamination risk.

- **Operational Efficiency:** Automation and remote monitoring have reduced manual labour and cut maintenance overheads.

- **Future Ready Scalability:** The modular plant design can easily expand to meet growing production demands.

- **Reliable Compliance:** Ongoing regulatory compliance provides peace of mind for internal teams and external auditors.

- **Long Term Cost Savings:** Reduced labour, maintenance, and downtime have improved the overall return on investment.

By partnering with Waterform Technologies, the company now operates a high performance, sustainable potable water system, future proofed to support its ongoing growth.



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