

Case Study

Winery Wastewater Treatment Upgrade – UltraBiox™ Biological System Enhancement



The Problem

In 2015, a well-established winery faced mounting challenges with its existing wastewater treatment lagoon. The system was struggling to keep up with increased flows and higher-strength wastewater—pressures that were expected to intensify with the upcoming 2016 vintage. At the same time, the winery was required to meet stricter discharge and odour control regulations.

With limited time before harvest and a system already at capacity, the winery risked falling out of compliance, incurring penalties, and facing an expensive \$50,000 power upgrade if a viable solution wasn't implemented quickly.

The Solution:

Waterform Technologies recommended a targeted upgrade using its ultraBiox™ biological wastewater treatment system—a low-impact, high-efficiency retrofit that improved the performance of the existing lagoon without major infrastructure changes.

Key elements of the upgrade included:

- Removal of three outdated aerators
- Repositioning of two existing aerators to improve coverage
- Installation of four Fuchs Oxystar Spiral Aerators — German-engineered surface aspirators known for:
 - Exceptional oxygen transfer
 - Effective mixing capabilities
 - Low maintenance requirements

Despite the tight timeline, Waterform completed the installation just ahead of the 2016 vintage, allowing the winery to continue operations seamlessly and meet increased wastewater treatment demands.

The Outcome:

The new ultraBiox™ system delivered outstanding performance in the 2017 vintage, achieving:

- 40% increase in treatment output
- 10% reduction in power usage compared to the previous year
- Avoided a \$50,000 power infrastructure upgrade
- Full compliance with regulatory and performance requirements

The retrofit not only boosted capacity and efficiency but also offered long-term cost savings—making it an ideal solution for wineries with existing treatment lagoons.

For wineries needing tighter discharge limits or options for water reuse, Waterform also offers modular tank-based systems, providing additional flexibility and value—especially during dry seasons when water conservation is critical.



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