OVERVIEW
A California vineyard was faced with the challenge of meeting wastewater treatment compliance under a tight deadline defined by local regulators, while receiving ongoing odor complaints from the community.

CHALLENGES
Extended periods of mismanagement from previous owners left the facility and the wastewater treatment system in disarray. Equipment with poor mixing capabilities and frequent mechanical failure allowed sludge to build up in the lagoon to an extraordinary level, with visible islands across the landscape of the lagoon surface. Poor mixing caused the excessive settling, dramatically decreasing the Hydraulic Retention Time (HRT) and, subsequently, the treatment efficiency of the lagoon system. This put the system at risk to violate permit effluent requirements. Poor aeration capacity, largely due to frequent mechanical failure, allowed hydrogen sulfide production to occur, causing significant odor problems.

SOLUTION
It was obvious the facility was in need of immediate assistance. The Aire-O₂ Triton® offered the mixing to move the sludge, oxygen to prevent the odors, and reliability to keep the system working. Leveraging past experience with the vineyard and working through a very busy crush period for the organization, the vineyard and Aeration Industries International were able to to move at a fast pace. Aeration Industries was able to ship the equipment, suggest a reliable contracting option for installation, and mobilize a technician to assist with installation and start-up. In addition, a member of the process engineering team from Aeration Industries was present to baseline the conditions of the lagoon to demonstrate improvement.
RESULTS

Within six weeks of installing the Aire-O² Triton®, sludge was reduced 17% and a distinct flow pattern to be used for further sludge management was identified. Dissolved oxygen levels continually increased and odor was controlled. The results illustrate opportunity to significantly improve sludge management to continue to achieve the primary objectives. It also suggests opportunity to improve upon the original design approach as a permanent solution and leverage it beyond its original capacity for future expansion. These results ultimately prevented violations and allowed the vineyard to focus on what they do best... make wine.

IMPACT

The efforts to meet this challenge demonstrate the vineyard’s commitment to environmental and community stewardship through responsible operation. It should also be celebrated as a means to support the local economy by recovering a substandard and potentially failing production facility. Aeration Industries hopes the successful progress remediating the wastewater problems and supporting actions demonstrate our commitment to being a valuable partner to the vineyard moving forward.

SOLUTIONS PROVIDER

Questions on how we can help solve challenges you’re facing? Contact us at +1-952-448-6789 for more information. Together, we can create innovative solutions for your wastewater challenges.