

Wastewater Treatment: DAF test equals system success

Pilot DAF test provides proof of PEWE dissolved air flotation system. Stuart Ward of *Process Engineered Water Equipment, LLC* explains DAF design is key...

Case Study

Committed to quality since 1934, Willamette Farms has built a strong reputation within the community. And being a good neighbor meant keeping a clean and healthy



Healthy aerobic lagoon

environment. Early on management had recycled process waters from their egg breaking operation to water the company fields and orchards adjacent to the facility. Screening, blending and aerobic biological treatment proved successful in reducing FOG and BOD to acceptable levels. In the summer of 2010 production continued to grow and it was decided to get ahead of the regulatory curve by being a leader in both secondary and tertiary treatment with the removal of TSS and nutrients such as phosphorous.

Pilot DAF Test

The plant manager first contacted us to test the treatment concept by



Pilot test DAF

ordering a DAF pilot test trial. The trial was scheduled and successfully completed within several weeks.

After testing it was found a PEWE **T²-Max™ Thickener DAF** could accomplish the desired goal of removing algae and TSS from the 2 million gallon aerobic biological lagoon water. Quick math showed that the resulting bio-solids would need addressing as well. The plan was to remove the algae, TSS and nutrients then press the solids and discharge the water to a new lake where it would again be reused for crops. To meet the requirement a PEWE **DeWater™ Belt Filter Press** was placed adjacent to the DAF. A **PolyAccu Dose™** station provided chemical dosing to these systems.



DAF & Press installed

Final Results

The complete system package was housed in a new building located between the aerobic lagoon and a newly constructed post treatment lake wetland. The DAF removed 99% of the TSS from the beginning. The Press squeezed excess water from the bio-solids saving on fuel, handling and space. Chemical usage proved economical and maintenance took just a few hours a day for the whole operation.



Low BOD & TSS water

Satisfaction with the all new wastewater treatment system is quite high. The new PEWE DAF and Press provide a steady stream of clean water and minimal solids. Willamette is now poised to tackle the next 100 years with a **Green** environment.



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