



Dairy Producer Complies with Demanding Standards

A dairy processing plant in Colombia has a long history in Latin America. Due to new regulation standards of local municipalities for wastewater effluent, they needed to improve the wastewater treatment system for the production and equipment washing processes. They also needed to increase production and subsequent flow rates.

Challenge

The local municipality effluent standards for Biological Oxygen Demand (BOD) were lowered to 7 ppm (mg/L). Like many dairy processing plants, this facility had high levels of total suspended solids (TSS,) fats, oils, grease (FOG,) and chemical/biological oxygen demand (COD/BOD.)

In addition, the company needed to increase production and thus flow rates from 25 m³/h (110 g/m) to 34 m³/h (150 g/m) due to high demand.

The primary dissolved air flotation (DAF) system was not adequately meeting the effluent standards set by the municipality. Occasionally the COD/BOD were double the design parameters of the old DAF and it could not keep up. Space issues were a concern for the dairy producer as well. There was just not enough space to add more DAF systems.



Industry Dairy

Key Benefits

1. Compliance to municipal standards
2. Reduced space requirements
3. Reduced wastewater treatment costs
4. Cutting edge technology

Inlet and Outlet Parameters

Parameter	Influent	Effluent GEM System	Effluent EGSB Reactor	Effluent MBR Reactor	Efficiency total (%)	Regulation Standars
COD (mg/L)	6,298	1,269	440	37	99,5%	NA
BOD (mg/L)	3,118	571	147	6	99,8%	7
TSS (mg/L)	2,001	147	92	3	99,8%	10

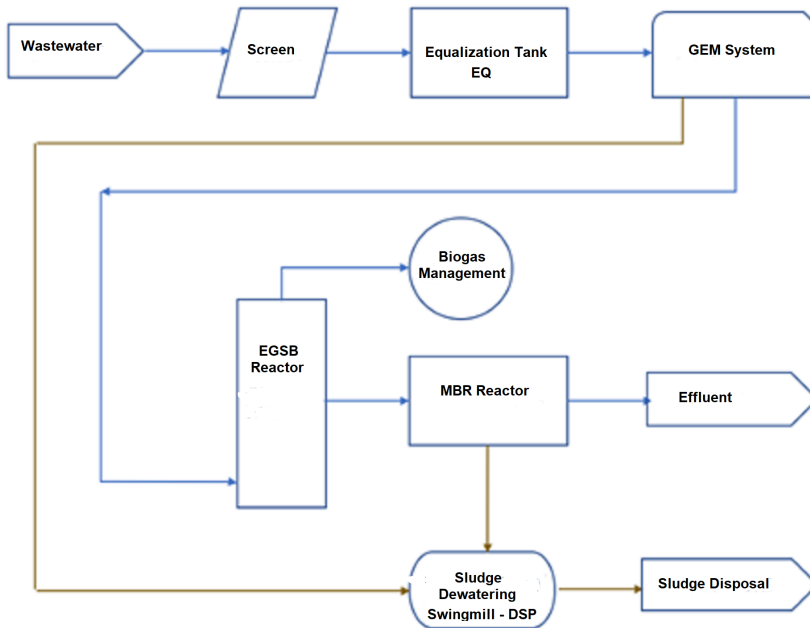
CLEAN WATER Technology

13008 South Western Ave • Gardena • CA • 90249 • USA

info@cwt-global.com • 310-380-4648 • www.cwt-global.com

Solution

Clean Water Technology (CWT) proposed an advanced primary wastewater treatment system (GEM[®] 150/300 System), followed by a biological wastewater treatment system of a EGSB anaerobic reactor which removes 75% of the BOD/COD, converting it into a biogas, and then an MBR bioreactor which achieves an effluent value below the municipal discharge minimum requirements.



GEM[®] System & EGSB Reactor



MBR Bioreactor



L to R:

Influent, GEM System Effluent, EGSB effluent, MBR effluent

Conclusion

The dairy facility chose the CWT proposal because it was the only solution that met the requirement of money savings and achieved needed effluent levels.

- The compact GEM System met space and money savings requirement.
- The GEM System 150/300 removes more than 85% of the BOD/COD required.
- The biological wastewater treatment (EGSB & MBR) is ideal for the high concentration effluent and reduced sludge production.
- The system achieves better results than expected even when flows fluctuate and the concentration of pollutants in the influent increases.

Contact us today to begin a conversation!

