

Industries:

- Municipal Wastewater Treatment Plants
- Slaughterhouses- Beef, Pork & Chicken
- Agricultural Lagoons - Beef, Pork & Dairy
- Aquaculture - Fish Farms, Shrimp Farms (fresh & saltwater)



Benefits:

- Increased microbiological activity
- Increased removal of BOD, COD and FOG
- Increased biomass decomposition
- Reduction or Elimination of odor
- Reduction in H₂S generation
- Reduction in turbidity
- Increased biogas production for biodigesters

Applications:

- Activated sludge
- Anaerobic/Aerobic reactors
- Anaerobic/Aerobic filters
- Anaerobic/Aerobic lagoons
- Facultative lagoons
- Maturation lagoons
- Clarifiers
- Biodigesters

JCW-MS - Wastewater Technology

JCW-MS is an aqueous based propriety technology solution that functions as a biostimulator which increases microbiological activity in water. It contains no foreign active bacteria, enzymes, nutrients or other biological components in itself but instead relies on stimulating these biological elements found in the locations where JCW-MS is applied to deliver increased activity.

As a “next generation” biological stimulant, JCW-MS is designed to provide an increased capacity of existing waste water treatment plants, delivering reduced operational costs and improved performance. This stimulation is applicable to a wide range of treatment systems, including both anaerobic and aerobic processes, reducing BOD, COD, TSS, FOG, H₂S and etc.

Without the requirement of any PPE’s for application, JCW-MS is non-hazardous, non-corrosive, non-irritating and ready to use, eliminating the need for mixing or diluting. This high-performance technology is applied proportional to daily flow rates, ranging from 1-10ppm, depending on existing performance and effluent severity.

JCW-MS is used in both municipal and industrial waste water facilities with easy application methods and no harmful by-products.





JCW-MS

NEXT GENERATION MEDIUM STIMULANT

Financial Impact

- Costs of US\$120,000 per year for drying bed usage and solids disposal was eliminated
- The US\$800,000 dredging cost was deemed unnecessary and was also eliminated

Case Study →

Wastewater plant built in 2010 composed of anaerobic reactors, anaerobic filters with 12 drying beds and maturation lagoons and receives 2.4MGPD of sewage. A performance demonstration of JCW-MS began with a dosage of 2.4Gal per day(1 ppm).

Objective: to demonstrate the increased performance of the waste water treatment process and to show a reduction in already deposited biomass in the maturation lagoons, in order to avoid dredging. The lagoon was at 58.8% solid content at the beginning.

Results at 22 days:

- The green coloration of the final effluent “disappeared”
- Surface biomass appeared, released from the bottom of the lagoon, due to decreased density and the production of biogas inside the layers of deposit solids
- Off gassing across the entire surface of the maturation lagoons, including “Dead zones”, where there is little to no flow due to accumulated biomass
- Hydraulic flow in previously considered “Dead zones” that form due to the sedimentation of biomass
- Reduction in odor generated at each stage of the system

Results at 83 days:

- The color of final effluent is very clear, without the presence of solids or odor
- Hydraulic flow in previously considered “Dead zones”
- The island of biomass that was present in the lagoon reduced considerably in size
- Biomass from the lagoons continues to release from the bottom, now with a much lower density
- Reduction in biomass at the exit
- The surface biomass (FOG) in the anaerobic reactors was consumed, only inorganic materials remained, such as plastics and etc
- Drastic odor reduction in the entire plant, noted by plant operators, employees and the surrounding population
- An increased efficiency in the removal of BOD and COD, achieving levels previously achieved in early years of plant operation
- Reduction in excess biomass in the anaerobic reactors, led to the “elimination” of the use of drying beds
- Reduction of 21% in the deposited biomass in the maturation lagoons from an initial 58.8% down to 37.8%. Continued application of the product will see further ongoing reductions of the organic solids component of the biomass over time.



Performance Impact

Typical findings after application:

- Reduction in odor / H₂S 15-30 days
- Reduction in BOD & COD 30-60 days
- Reduction in excess solids and FOG 60days+
- Reduction in TSS and turbidity 15-30 days
- Increased Biogas production 60-90 days

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