

NON-MECHANICAL

NO CHEMICALS

NO NEED FOR LARGE INFRASTRUCTURE

DECREASE IN GHGS

LOW MAINTENANCE

SOLAR-POWERED

LOW OPEX AND CAPEX

SINGLE UNIT IMPACTS 16-20 HA OF WATER SURFACE

# Other applications

## IRRIGATION PONDS

- Maintain pH
- Reduce clogging of drip irrigation lines
- Reduce maintenance of filters
- Reduce odour
- Restore ecological balance
- Reduce conditions promoting eutrophication
- Decrease Greenhouse Gas emissions

## INDUSTRIAL PLANTS

- Increase quality of influent
- Improve process flow
- Reduce maintenance on downstream equip
- Reduce energy cost
- Decrease Greenhouse Gas emissions

## AQUACULTURE

- Improve Dissolved Oxygen Levels
- Reduce Odour
- Increase in-situ sludge digestion and reduce dredging requirements
- Prevent mass fish kills
- Restore ecological balance
- Reduce conditions that promote eutrophication
- Reduce Greenhouse gases

Healing the  
Environment and  
Transforming  
industry



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CASE STUDY

# Sewage and Wastewater

## PORT LAMBTON LAGOON (CANADA)

### PROBLEMS

- Accumulation of sludge
- Odor
- Eutrophication

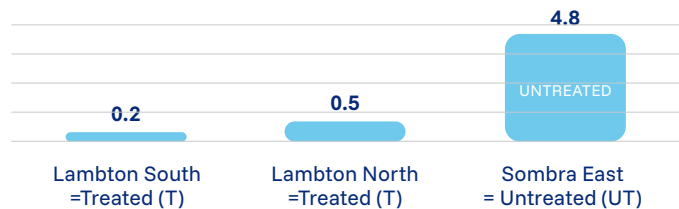
### RESULTS

- Reduction in sludge accumulation
- Odor reduction
- Reduction of conditions leading to eutrophication in 137 days

### PARAMETERS

- ↓ 7% TSS
- ↓ 69% BOD
- ↓ 80% Ammonia
- ↓ 88% E-coli

### SLUDGE ACCRUAL CHANGE (CM)

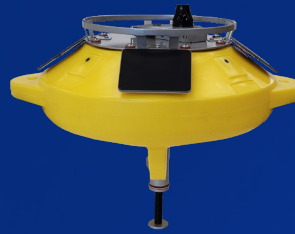


### METHANE EMISSIONS ESTIMATE



# Open Waterbodies

- Reduce conditions that promote eutrophication
- Promote conversion of excessive nutrients to food chain
- Prevent mass fish kills and reduce bad odors
- Promote thriving and diverse aquatic life
- Enhance aesthetics and water clarity
- Restore ecological balance
- Improve aquatic plant control
- Decrease Greenhouse Gas emissions



# Sewage and Wastewater

- Manage nutrient levels
- Reduce regulated water parameters
- Reduce E. coli and other anaerobic pathogens
- Promote an aerobic waterbody
- Digest organic sludge in situ
- Increase facility processing capacity
- Delay or eliminate expensive dredging
- Allow for a cost-effective sludge management

## LOWER OPEX AND CAPEX

Reduce OPEX by lowering costs associated with mechanical aeration and sludge management

Improve CAPEX by reducing the need for new infrastructure to increase processing capacity

CASE STUDY

# Lake, Pond and Reservoir

## AMATA SPRING (THAILAND)

### PROBLEMS

- Seasonal fish deaths (Feb and Oct)
- Odor
- Poor water clarity
- Excessive nutrients

### RESULTS

- No mass fish kill
- Odor reduction
- Improved water clarity

### PARAMETERS

- ↓ 40% COD
- ↓ 70% Ammonia
- ↓ 85% Chlorophyll- $\alpha$
- ↓ 50% Nitrogen
- ↓ 80% Phosphorus
- ↓ 70% BOD

### IMPROVEMENT AFTER 6 WEEKS OF TREATMENT



Before

After