

# 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

## **INDUSTRIAL PLANTS**

- 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

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Healing the Enviroment and Transforming industry



# 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





Lambton South =Treated (T)



Lambton North = Treated (T)

#### Sombra East =Untreated (UT)

### PRODUCTS

# EMF 1120

- 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 aguatic life
- Enhance aesthetics and water clarity •
- Restore ecological balance
- Improve aquatic plant control
- **Decrease Greenhouse Gas emissions**



# **EMF 1200**

- 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

# 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 STUDIES: EMF 1120

# Lake, Pond and Reservoir

# AMATA SPRING (THAILAND)

### PROBLEMS

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

### RESULTS

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

### PARAMETERS

- ↓ 40% COD
- ↓ 50% Nitrogen
- ↓ 80% Phosphorus
- 4 85% Chlorophyll-α
- ↓ 70% Ammonia ↓ 70% BOD

### **IMPROVEMENT AFTER 6 WEEKS OF TREATMENT**



Before

After

- •

### Allow for a cost-effective sludge management