



WASTEWATER SOLUTIONS

## LS 4000: Lagoon spikes

Biological alternative to dredging municipal lagoons



LS 4000 offer a new way to minimize settled sludge volume and reduce solids handling costs in municipal wastewater lagoons. BioSpikes are made via a process that creates a dense spike that rapidly sinks to the bottom of a lagoon, even when applied at the water's surface. This makes dosing easy and ensures contact between the microorganisms and the sludge. It is also easily applied to problem build-up areas to eliminate shortcircuiting.

### LS 4000: Reduce dredging costs and improve system efficiency in wastewater lagoons

BioSpikes sink to the bottom of the lagoon and release billions of microorganisms, powerful enzymes, and essential micronutrients directly into the sludge layer. This combination ensures rapid stimulation of biological activity and reduction of the sludge layer. This reduces the dredging frequency, increases hydraulic retention time, and improves overall lagoon performance.

### The benefits of using LS 4000

#### Lower operating cost

- Reduces dredging frequency
- Reduces volume of sludge to be dredged

#### Improved plant efficiency

- Improves hydraulic retention time
- Increases operating lagoon time
- Minimizes shortcircuiting

#### Simplified operations

- Can be applied directly to hot spots
- Reduces sludge without interrupting treatment

1

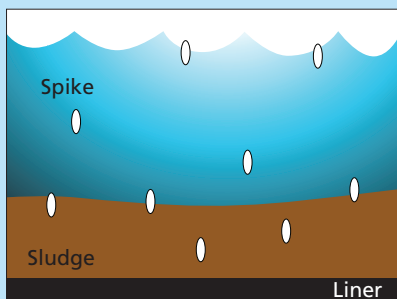


Fig. 1. LS 4000 spikes are dropped at the water's surface and sink directly into the sludge layer below.

2

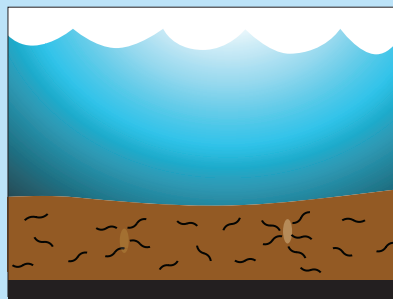


Fig. 2. Microorganisms permeate throughout the sludge layer.

3

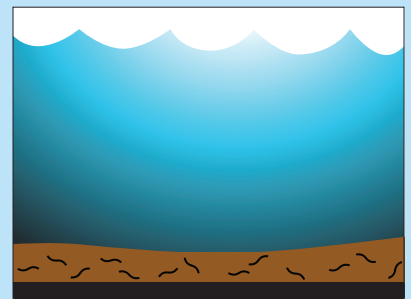


Fig. 3. Microorganisms, enzymes, and nutrients stimulate biological activity and reduce the sludge layer.

### Enhancing your business is our business

Team up with IFM for innovative biosolutions to reduce costs, improve water quality, and capitalize on renewable energy opportunities. Unique products, experience with beneficial microorganisms and enzymes, and our commitment to improve our business are just three reasons to choose IFM as your bioinnovation partner.

### For more information please visit [ifmenviro.com](http://ifmenviro.com)

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