

Municipal Lagoons



BIO-SYSTEMS
INTERNATIONAL

Specifications

Form: Free-flowing granular powder
Color: Brown
Nutrient Content: Biological nutrients & stimulants
Plate Count: 5 billion per gram

Packaging

250 grams water soluble packages protected by a foil overwrap. 10 kilos per plastic pail.

Storage

DO NOT FREEZE! Store in a cool dry location. Do not inhale dusts, avoid excessive skin contact. SEE M.S.D.S.

Application Instructions

Lagoon Systems

• For facultative lagoon systems, the application rate is based on the lagoon surface area:

Day 1 through Day 5 20 lbs. per acre per day
Day 6+ 1 lbs. per acre per week

• For anaerobic lagoons, the application rate is based on the total volume of the anaerobic lagoon.

<100,000 gallons 1 lb. - 2x per week per 5,000 gal.
>100,000 gallons ½ lb. - 1x per day per 5,000 gal.

• For lagoons in cold climates, commence program when the water temperature is at least 50°F



Case History 735

This site in Northern Ohio has an 18 acre lake that was plugged with weeds. Every year they added weed killer to the lake and then seed the lake with 150 fish (Amers) to eat the dead weeds, achieving minimal results.

At the beginning of 1997 they added 200 lbs. of BioBug in addition to the Amers and aeration. On 8/1/97 they noticed a 75% reduction in weeds.

This program has been continued for the last two years with significant improvement in water and fish quality.



Case History 737

BIO-SYSTEMS products were added from the survey boat to the lagoon. The addition of these three products supplied the synergy to stimulate bacterial activity on the lagoon floor and digest solids.

Completed on November 7th 1997 with the measurement of final sludge depths, evaluation of bacterial activity and other higher life forms. The second lagoon was markedly improved compared to earlier visits. The bottom of the lagoon was clearly visible from the boat, water clarity was such that a leaf on the floor of the lagoon could be seen.

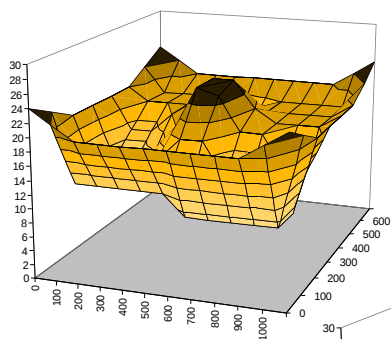


*Algae, Duckweed
& Sludge Reduction*

Your local Distributor is:

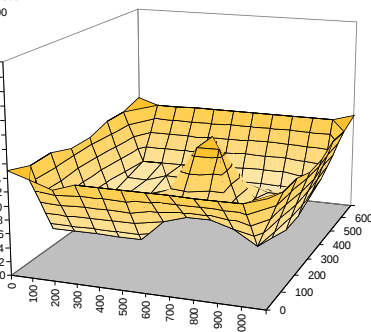
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Before

After



1-800-232-BUGS
2 8 4 7
www.BIOBUGS.com

Municipal Lagoons



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Description

BioBug ML is a biological product specifically formulated to be effective in enhancing municipal waste water biology in lakes and lagoons.

As well as microorganisms, BioBug ML contains a micronutrient blend specially selected for sludge reduction. This micronutrient blend provides a complete formulation for maximum biological activity and reacts with municipal waste to produce biological enhancers.

When used as directed BioBug ML is safe and is harmless to people, clothing and the environment and is completely biodegradable.

Through extensive research activities, BioBug ML has been developed to involve specific strains of bacteria which have been selected for their ability to perform under both aerobic and anaerobic conditions, and to biodegrade organic material comprised of proteins, fats, carbohydrates and select hydrocarbons.

To assure rapid establishment in the biomass, BioBug ML is produced and blended with select biological nutrients and stimulants. BioBug ML is produced under cGMP and ISO9001 certificated quality system.

Effect

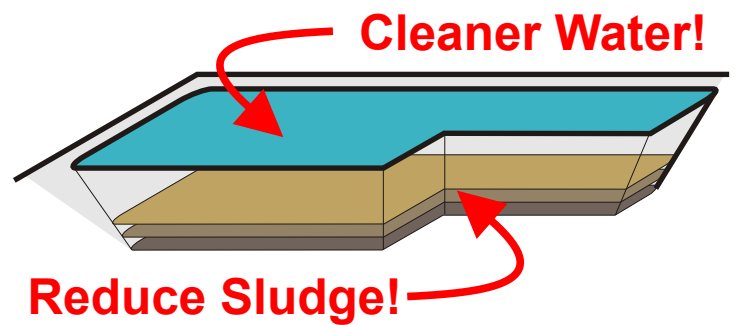
BioBug ML, with its aerobic and facultative anaerobic microorganisms establishes and maintains a biomass which by providing greater resistance to the effects of organic inhibitors present in municipal waste waters, is able to perform more effectively than the naturally occurring biomass. BioBug ML ensures that the natural mechanism for the selection of the biomass population is presented with a range of selected microorganisms. These aerobic and facultative anaerobic bacteria have been taken from their natural environment and then adapted to give optimum performance.

Benefits of BioBug ML:

- Reduce organic contaminant and sludge
- Improve water clarity and effluent's quality
- Reduce odor and ammonia
- Fast start-up for upset conditions

Algae & Duckweed Control

- Ensure rapid biological start-up with suppression of undesirable algae and duckweed.
- Provide competitive organisms to reduce algae and duckweed activity.



Sludge Reduction Programs

- Reduce sludge build-up
- Control grease, foaming, or scum formation
- Improve settling
- Reduce odors
- Produce an excellent effluent
- Defer dredging costs
- Improves cold weather operation



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