

# MICROBE-LIFT®

Solving Environmental Problems *Naturally*

## Microbe-Lift® CAN HELP YOU:

### REDUCE OR ELIMINATE ODOR COMPLAINTS AT THE SOURCE

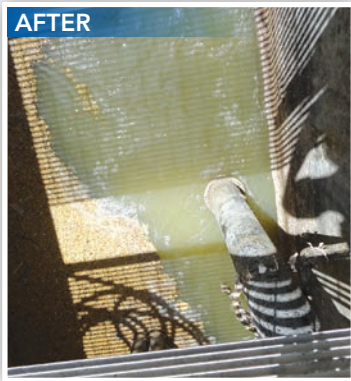
- Stay in Compliance with Government Regulations
- Reduce the Impact on Neighbors
- Provide a Healthier Work Environment
- 100% Natural, Safe and Environmentally Friendly
- Eliminates H<sub>2</sub>S and Ammonia at the Source

### REDUCE OPERATING COSTS

- Keep Collection Systems Flowing
- Reduce Backups and Overflows
- Reduce or Eliminate Odors in Drains and Wet Wells
- Reduce BOD, COD and TSS from Your Effluent Lines

### REDUCE THE COSTS OF SLUDGE HANDLING

- Reduce 90% or More of Volatile Solids from Waste Water Ponds and Wells
- Reduce the Need for Expensive Mechanical Dredging and Haul Away



## PROVEN RESULTS AT A WASTE WATER TREATMENT FACILITY

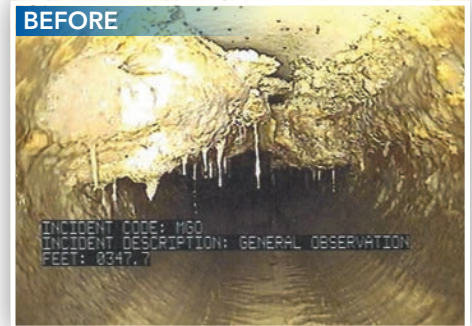
The pictures above are of the headworks this city installed when a new waste water treatment facility was built in 2010. The collection system and lift stations were plagued with rapid grease buildup. However, a bigger problem was the buildup of 2 to 3 feet of grease in the new headworks that required costly pumping every 5 to 6 weeks. The waste water manager stated that he had never seen any technology that worked to clear the grease before using Microbe-Lift® products in the system.

Treatment has now been expanded to the entire collection system. The reduction in backups and overflows, and the need for hydro flushing has saved the city tens of thousands of dollars annually since they started using our products.

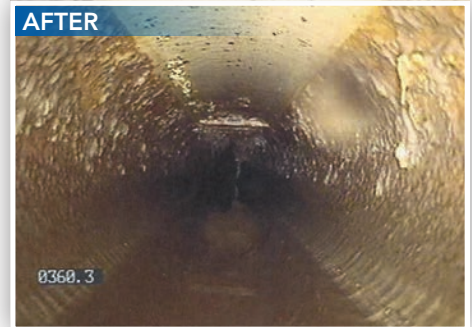
## PROVEN RESULTS IN A SEWER COLLECTION SYSTEM

This city manages over 200 miles of sanitary sewer collection systems, and they have five pump trucks on a constant rotation flushing lines in an effort to reduce Sanitary System Overflows.

The picture to the right is of a 10-inch sewer line that had recurring heavy grease buildups. This part of the system is set to fill completely before the lift station pumps start, allowing grease to attach to all surfaces of the pipe.



A video camera unit routinely inspects the lines for breakage and potential weak areas before they become large problems. On August 29, 2013, because of massive amounts of grease in the line, the camera was only able to go a little over half way before getting stuck.



Treatment with Microbe-Lift® products started on September 24, 2013. After five months of treatment, as shown in the photo above, the grease had cleared and the camera was able to easily run all the way through the line to the next manhole.

It should be noted that the once per week treatment, and the accompanying result, was introduced into one manhole 500 feet upstream. This incredible success was achieved by using only 10 gallons of Microbe-Lift® products.

*These are just two of the successful case studies we have documented. At your convenience, we will take you through some of these success stories so you can see for yourself how Microbe-Lift® products can work for you.*



EXCLUSIVE DISTRIBUTORS OF MICROBE-LIFT® PRODUCTS

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## THE SCIENCE

Microbe-Lift® is designed specifically to control odors related to the production of hydrogen sulfide within anaerobic systems and processes. Microbe-Lift® differs from most, if not all, commercial bio-formulations in that it contains a select consortium of cultures that exhibit unique anaerobic oxidation capabilities.



The predominant organisms in Microbe-Lift® are of the purple sulfur group. This bacteria consortium is divided into two major categories — purple sulfur and non-sulfur organisms. The purple sulfur bacteria, which include *Thiobacillus sp.*, utilize hydrogen sulfide as an electron donor and oxidize the sulfide to elemental sulfur which is temporarily stored intercellular. This metabolic process makes Microbe-Lift® extremely efficient in curtailing odors due to hydrogen sulfide when moderate levels of hydrogen sulfide are present. The purple non-sulfur bacteria are highly efficient at the assimilation of organic compounds, including difficult to degrade compounds such as fatty acids, organic acids, proteins, and other odorous compounds — some of which cause odors themselves. This combined biological process reduces H<sub>2</sub>S emissions and reduces the organic matter necessary for H<sub>2</sub>S production.

## OUR MANUFACTURING FACILITY

We use our proprietary fermentation process to provide products that are environmentally safe without sacrificing consistent performance. Our highly advanced facility makes the difference when it comes to providing safe, economical, consistent products. All Microbe-Lift® products are manufactured in our FDA and EPA registered facility to food grade standards.

### PRODUCTION CLEAN ROOM

Our facility is designed to accommodate our multistage fermentation process by utilizing stainless steel equipment, HEPA filtration for controlled air quality, and operating room flooring to assure a sterile environment during bottling.

### WAREHOUSE FULFILLMENT

Rotating inventory combined with long-term shelf stability allows for quick turn around — usually within a few days of submitting your order. This assures you receive the products you need, when you need them, without any long delays.

### LABORATORY, RESEARCH AND DEVELOPMENT CENTER

At our state-of-the-art facility you will find Genetic Sequencing and Analysis, DNA Amplification, Real Time PCR, Anaerobic Chamber, Nucleic Acid Quantification, Two Culture Banks, and Fermenters.

## ABOUT US

At AquaNatural Solutions we supply our customers with not only the best products for the management of waste water systems, but we also pride ourselves with providing our customers with superior personal service. We take the time to analyze the problems occurring in each system, and then we develop treatment protocols specific for the challenges in that system. Understanding that needs change, we continually follow up to insure success, and look forward to working with our customers on a regular basis.

AquaNatural Solutions is the exclusive distributor of Microbe-Lift® products. Manufactured since 1976 by Ecological Laboratories in Cape Coral, Florida, our products contain unique proprietary blends of beneficial bacteria. All Microbe-Lift® products are capable of reducing H<sub>2</sub>S and ammonia emissions at the source — lowering complaint calls.

The bacteria also diminishes the buildup of fats, oils and grease in lift stations and collection systems, and reduces sludge generated by the operation of secondary biological treatment systems.

The savings through the reduction of man hours, equipment costs and handling of these materials can be substantial.

**Let Us Help You Find Your Solution.**

FDA Registered  
Facility # 3005925249

EPA Registered  
Facility #74466-FI-001



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