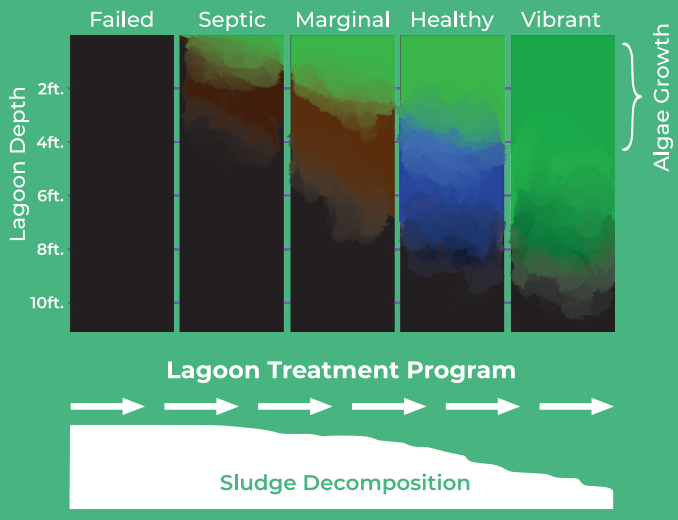
BLENDING SCIENCE & NATURE

About Us

Clearbrooke Technologies is located in Freeland, Michigan serving customers throughout the Midwest. We perform our services in Wastewater Treatment, Industrial Processing, Institutional Applications and the Paper Industries. We support Environmental Management Systems (EMS), and quality programs such as ISO 14000 and Good Manufacturing Practices (GMP).

We provide life science chemistry-based solutions for municipal and industrial applications from air scrubbers to waste treatment processes. Our technology focus is pH neutral chemistries that work to eliminate odors, reduce COD/BOD, breakdown Suspended Solids, Fats, Oils and Grease which provides a more treatable waste for downstream processes.

Productivity Stages of a Lagoon



Lagoons Treatment

The treatment of wastewaters in both municipal and industrial applications nearly always incorporates a biological process at some stage. Populations of many different types of organisms exist at varying levels depending on food (waste) source, temperature, pH, oxygen level, etc. This combined population is collectively known as biomass. Maintaining a biomass requires tight control of several parameters, loss of control through improper operation, presence of toxicants or sudden environmental changes can result in contaminants passing through the system. Failure of a biomass may result in environmental damage and restoring its health can require considerable time and effort.

Clearbrooke Technologies products are designed to enhance the efficiency of this biomass by improving oxygen utilization efficiency through acclimation with a continuous feed of 2-10 ppm. This level generally increases the metabolic uptake rate so that more oxygen is available for the biomass which reduces COD, H2S, ammonia, phosphorus and other contaminants.

By utilizing a special system of biosurfactants, enzymes and other Life Science Technologies, our products are also very effective as cleaners as well as wastewater additives meeting FDA, USDA, EPA and DEQ requirements.

LAGOON TREATMENT CASE STUDIES

Case Study #1

Sludge: Sludge removal cost for cells 1 & 2 was $300,000.00+. Our lagoon program reduced sludge levels by 25% in year 1, saving $75,000.00 in removal costs.

H_2S/Odor: This wastewater treatment lagoon averaged six odor complaints per year. After the program took full effect, there were 0 complaints.

Aeration Costs: To help increase their dissolved oxygen numbers, two aerators were in use with a cost of $1,500.00 per month, plus man hours for maintenance and repair. Three months into our lagoon program, dissolved oxygen numbers increased, and the aerators were retired.

Parameters:	Before:	After:	Change:
BOD	50.00	11.00	-39.00
TSS	70.00	26.00	-44.00
DO	7.90	14.00	+6.10
Amm	2.18	1.00	-1.18
Phos	3.84	1.23	-2.61

Case Study #2

Sludge: removal cost was 25% greater than average due to high metal content in the sludge. The sludge levels see 10% reduction annually each year it was measured with the Clearbrooke Technologies proactive pretreatment program.

Odor Control: Before our program, the customer had extensive odor from Cell #1 and the main lift station in town. After one week, all odors vanished and there was no odor from spring turn-over.

Parameters:	Before:	After:	Change:
BOD	2.40	2.30	-0.10
Fecal Coliform	76.00	10.00	-66.00
DO	9.25	12.40	+3.15
Amm	6.70	0.69	-6.01
Phos	4.90	1.54	-3.36

"I would personally like to send my appreciation for all your support, knowledge, and cooperation with the Village of Birch Run. Your assistance with our wastewater treatment has been excellent throughout the years. We have a great partnership and I look forward to continuing our work together. Thank You!"

MARTY HUCK
Village of Birch Run

"We began using [Clearbrooke Technologies] in 2008. Odor at the plant was noticeably less after the first day, grease build up was less after one week. Our primary classifier maintained a consistent D.O. of 1.0 ppm. After using [Clearbrooke] we now maintain a D.O. of 33 ppm in the primary. We also have been able to shut the blower off 8—12 hours a day and saved 60—75 kilowatts daily. We are very satisfied."

FORD HAMMON
Village of Bellevue

CLEARBROOKE TECHNOLOGIES

10330 Hercules Drive
Freeland, MI 48623
www.clearbrooketech.com
989.625.5020

MARTY ANTONELLI
Wastewater Pretreatment
Account Manager
989.598.6976
mantonelli@clearbrooketech.com