

## Mulberry Lake – Kansas City, Missouri

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**Case Study: SCD Bio-Klean™**  
**Algae Blooms in Lakes and Ponds**

### Briarcliff Development (Village)



Briarcliff Development is a residential and commercial developer that owns and manages Briarcliff Village, an office, retail, and residential community located just north of Kansas City, Missouri.

Briarcliff Village is located on 600 treed acres along with Mulberry Lake; a two-acre body of water.

Visitors and tenants hold many community related events at Mulberry Lake including festivals. Mulberry Lake has also become a popular gathering point at Briarcliff Village.

Briarcliff Development desired to maintain the lake in a sustainable fashion and did not want to introduce harmful or potentially toxic chemicals into the water in order to eliminate the algae.

### Technical situation

Mulberry Lake doubles as a storm water retention area for the surrounding high-end residential community as well as the neighboring Class A office building.

Storm water run-off from these highly landscaped areas has led to a nutrient rich environment due to the amount of fertilizers and chemicals used on these landscaped areas.

With hot summer weather heating the temperature of the water, algae bloomed and covered most of the shoreline as well as choking off and covering the entirety of the north end of the lake near a small man-made water fall.



## Project Goal

OCCU-TEC offered an organic solution to essentially manage the current eco-system's microbial activity through the use of Probiotics technology. OCCU-TEC partnered with SCD Probiotics, a Missouri-based life sciences company, to use SCD Bio-Klean™, a cost-effective, green solution for improving water quality in lakes and ponds.

Probiotics are live microorganisms that, when applied in sufficient amounts, deliver a health benefit to the host. Traditionally only thought of as beneficial to human health, Probiotics are beneficial microorganisms (lactic bacteria, yeasts, and phototropic bacteria) that benefit ALL types of environments.



SCD Probiotics manufactures SCD Bio-Klean™ through a natural fermentation process using beneficial microorganisms. SCD Probiotics microbial strains, or beneficial microorganisms, are grown in what is known as consortia (a co-growth environment), allowing each strain to interact with other strains throughout development.

This proprietary method is very similar to how microbes occur in nature, versus the more common practice of growing singular strains in a pure-culture format and then blending different strains together at the time of packaging. This consortia technology is what enables SCD Bio-Klean™ to have high efficacy in a multitude of applications.

By targeting agricultural operations, septic systems, boat docks, water fowl breeding areas and sewer outfalls it is possible to control the amount of harmful bacteria that enters our recreational waters.

However Mulberry Lake has nonpoint source run-off from the surrounding community, not unlike many other community lakes and ponds. Therefore direct application of SCD Bio-Klean™ into the lake water was the best solution.

## Methodology

OCCU-TEC performed the following in order to control the algae blooms at Mulberry Lake.

- Determined the total volume of lake water by measuring the surface area and known depths (approximately 3,000,000 U.S. gallons of water).
- Working with SCD Probiotics technical team, developed an application protocol that would be both cost-effective and beneficial to the ecology of the lake.
- Spray applied SCD Bio-Klean™ directly onto the algae blooms and surrounding water at a predetermined diluted ratio and application rate to ensure adequate coverage.



## Results

A significant reduction in the size of the algae blooms was observed in as little as 72-hours. A 90% reduction was achieved within 14-days of application of SCD Bio-Klean™.

Due to the constant re-introduction of nutrients and other contaminants in Mulberry Lake via storm water run-off, OCCU-TEC's protocol called for application of SCD Bio-Klean™ at a rate of ½ of the initial application every two weeks during periods of hot weather (summer).



**More Information regarding this Case Study can be obtained by contacting:**

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