

## BiOWiSH® Aqua

### Improving Water Quality at Recreational Lake in Tire, Turkey

#### Background

The municipality of Tire is in the process of developing a public recreation facility that is based around a natural lake. The project includes landscaping around the lake area and building a modern restaurant facility overlooking the lake view. The lake is about 20 thousand square meters and the average depth is about five feet (1.5 meters).

Tire is a small charming district that is surrounded by the fertile Menderes Plain and the district of Ödemis to the North, Selçuk and Torbalı to the West and the mountainous Aydin to the South. The area is often referred to as "Green Tire" having very thick and lush flora.

Several problems prevented development of the lake: vegetative debris floating in the water, poor water clarity, and rotting plant life producing strong odors.

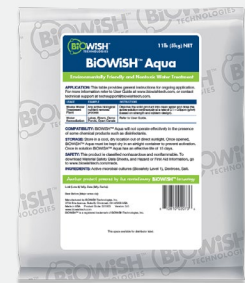


#### Objectives

Due to the thick vegetation and a certain amount of organic pollution in the lake, the water has poor clarity and the rotting vegetation has caused an unpleasant odor to develop. Local residents and visitors have complained about the persistent odor problem and, consequently, high volume of organic attractants.

BiOWiSH® Aqua was applied directly to the lake in order to improve the water quality in the lake, eliminate the odor, and remove organic attractants.

#### BiOWiSH® Aqua



- Rapid nitrification and denitrification in aerobic and anaerobic conditions
- Reduces sludge production
- Increases plant treatment capacity
- Reduces odors
- Reduces aeration requirements
- Reduces need for chemical additives
- Improves plant stability
- Pre-treats influent in collection systems
- Natural and non-toxic

#### Available Sizes

- 100g/3.5oz
- 1kg/2.2lbs
- 5kg/11lbs
- 10kg/22lbs

## Solution

30kg of BiOWiSH® Aqua (1g per cubic meter) was mixed with water in 3 previously cleaned tanks (10kg of BiOWiSH® per tank), each with 800 liter capacity and pumped through a pressurized hose directly into the lake. The application program was planned to start with an initial dose of 30kg in the first month and 15kg for the following months.



## Results

The results were visible immediately with the clarity of the water improving so drastically that the rocks in the bottom became clear and the animal life in the water (frogs, fish, lily pads) became noticeably more active when the water quality improved. The locals enjoying the recreation area commented on the sudden improvement in the odor problem.



Before BiOWiSH®



After BiOWiSH®



Before BiOWiSH®



After BiOWiSH®

## Conclusion

The Tire Recreational Lake Area project is a successful endeavor of the Tire Municipality. The BiOWiSH® Aqua application has been declared successful in helping Tire locals enjoy the recreational area by cleaning the pollution in the lake, improving the water quality, eliminating odor and reducing organic attractants. Tire Mayor Tayfur Çiçek expressed his great pleasure at the success of this application. Pursuant to the contract made with the Tire Municipality the BiOWiSH® applications continue at a low maintenance level of 15kg per month.

## Testimonial

“After the application, water quality become remarkable in a short time. Odor problems reduced day by day and also the nature life of the lake environment revitalized. Everyone is aware of the improvement. We appreciate your help to make this recreation area much more pleasant”.

- Mr. Birtan Armagan, Parks and Gardens Director of Tire Municipality and Agricultural Engineer, M.Sc.



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