



NANOBUBBLES CONTROL ALGAE IN SOUTH DAYTONA, FLORIDA STORMWATER PONDS

Client Case Study: South Daytona, Florida

Owner: South Daytona, Florida	Unit Type: Kingfisher	Lake Size: 2 acre-feet, 0.53-acre, average depth of 3.75 feet	Challenge: <ul style="list-style-type: none"> Algae blooms Aeration and fountain not effective Poor water quality 	Results: <ul style="list-style-type: none"> Reduced algae within 3 weeks after installation Eliminated chemical applications needed
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The City of South Daytona, Florida manages a series of stormwater retention ponds that ultimately drain into the Halifax River on the east coast of Florida. Like most lakes in this region, they struggled to control excessive algae blooms and to maintain water quality in several of the ponds. To combat these issues, they tried implementing conventional aeration and fountains, though neither helped reduce algae or improve the water quality.

Moleaer's distributor, Clear Waters Lake Management, advised the city to try nanobubble technology to target the root cause of the problem and improve the water quality overall.

How Nanobubbles Restore Lakes and Ponds to Combat Algae

Nanobubble technology is a restorative tool that provides efficient oxygenation and chemical-free oxidation to combat lake problems like algae, muck, nutrients, and water quality sustainably.

Indirectly, nanobubbles create conditions that make it harder for algae to thrive by increasing dissolved oxygen and improving the oxidation-reduction potential (ORP or Redox), a measure of water's oxidizing capacity to break down contaminants.

Introducing high concentrations of nanobubbles into the water increases the oxygen levels in the water, particularly in the deeper layers where oxygen is often limited. This efficient oxygenation of the entire water column can limit the growth of algae and promote the growth of beneficial bacteria. More beneficial bacteria help convert excess nutrients such as nitrogen and phosphorus into less harmful forms, which reduces algae proliferation.

Furthermore, nanobubbles help break up and disperse existing algae blooms by causing cell lysis or degradation of algae through natural oxidation. This prevents the formation of dense mats of algae on the water's surface, which can block sunlight from reaching deeper layers of the water and create oxygen-depleted zones.

Reduced Algae and Clearer Water in Under a Month

Clear Waters Lake Management suggested the Kingfisher nanobubble generator from Moleaer. Only three weeks after the Kingfisher installation, the city saw significantly reduced algae and clearer water. The results were so impressive, the former City Manager and pond-front resident, Joe Yarbrough, stated,

“ This product will revolutionize the way the public sector and homeowner's associations address water quality in stormwater retention ponds. In less than a month of using the Kingfisher nanobubble equipment, the pond was free of algae and the water was crystal clear. I have managed cities for over 45 years and this product is absolutely amazing. ”



BEFORE



AFTER



Got muck, algae, foul odors or nutrient problems? Learn how nanobubbles can help by downloading our eBook: www.moleaer.com/lake-management-nanobubble-ebook

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