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LAKE RESTORE

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ADVANCING NANOBUBBLE TECHNOLOGY

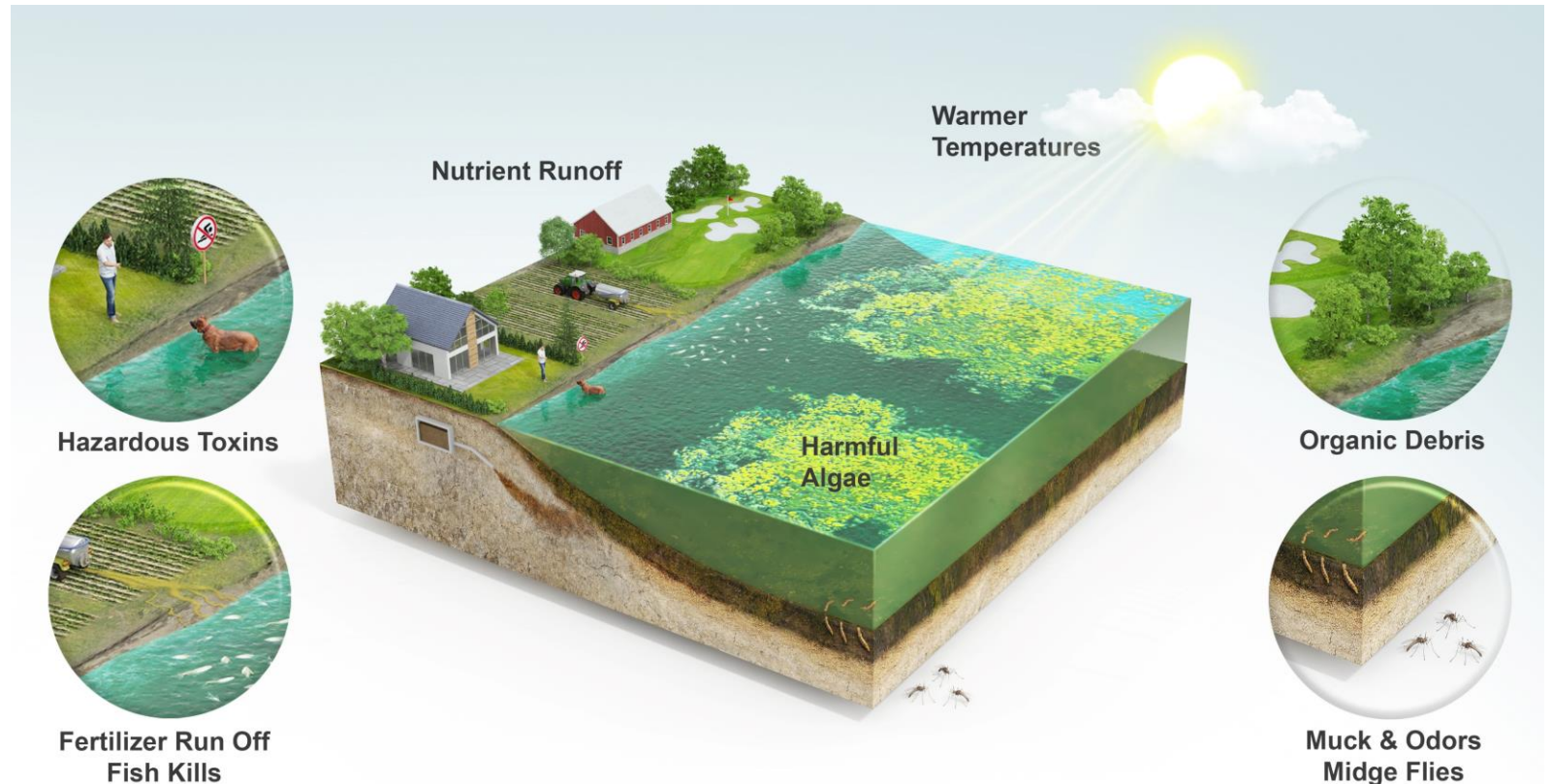
Nanobubbles: Restore Your Lake or Pond with Sustainable Technology



1.800.450.6295

What are Your Top Lake & Pond Concerns?

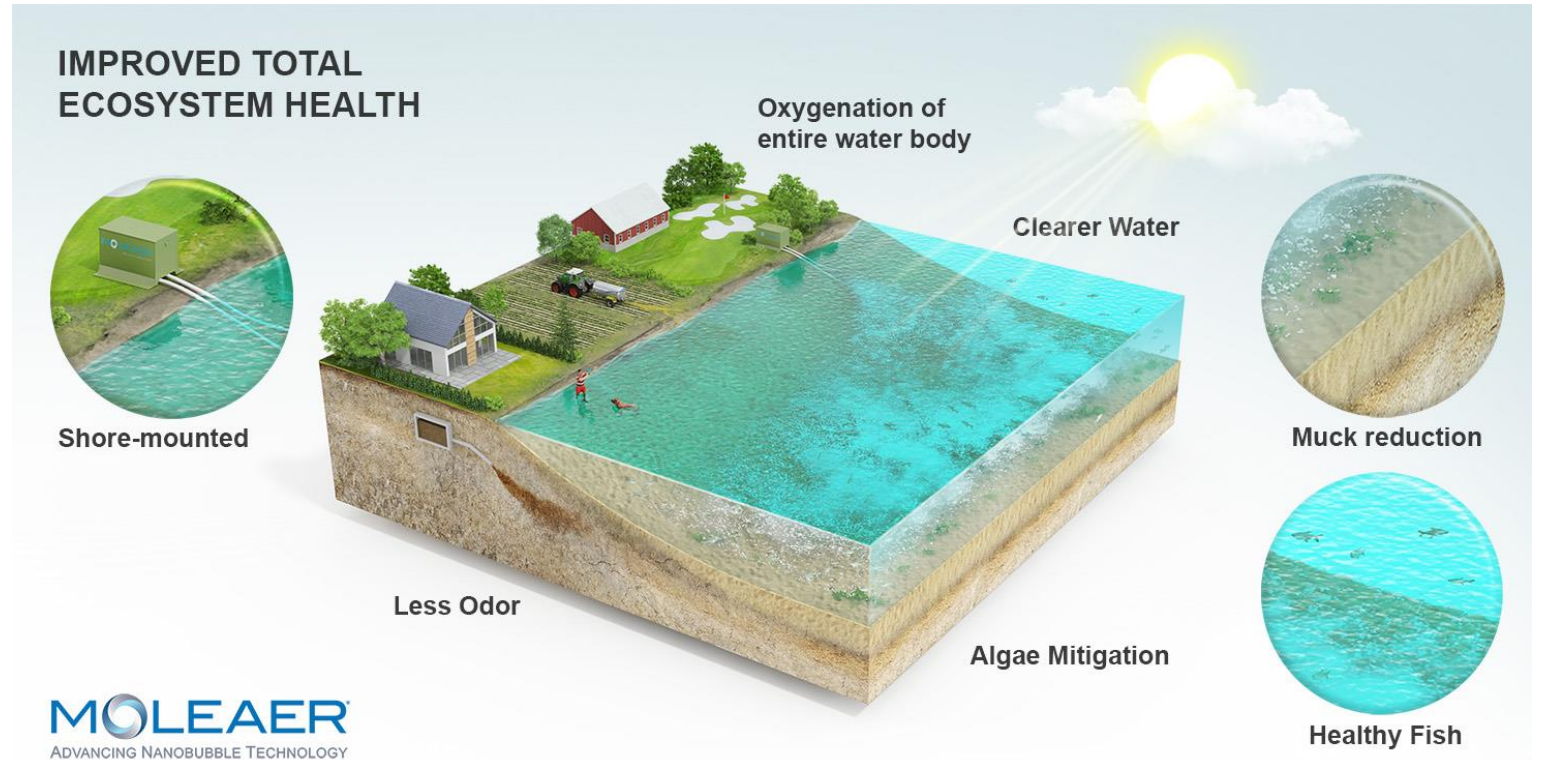
- Muck
- Algae
- Poor water quality
- Low dissolved oxygen
- Contaminants
- Pathogens
- Excess nutrients
- Foul odors
- Fish kills



What if One Sustainable Tool Could Help Reduce these Problems?

By targeting the root cause, nanobubbles help:

- Reduce muck
- Combat algae proliferation
- Improve water quality
- Increase dissolved oxygen
- Degrade contaminants
- Suppress pathogens
- Sequester nutrients
- Lessen foul odors
- Reduce fish kills
- Other benefits: turf/irrigation

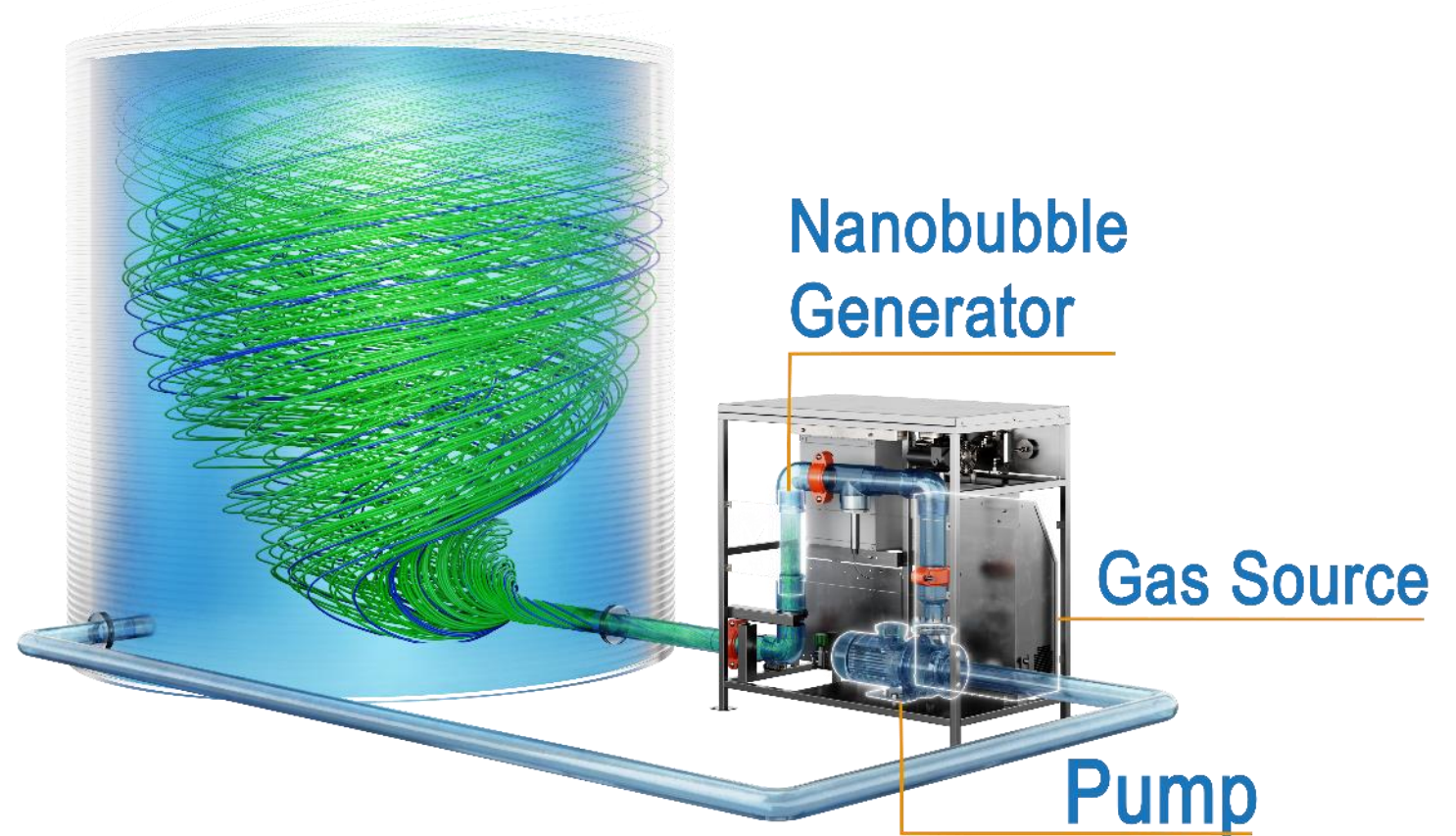


Patented Technology

Introduces **two forms of gas** into the water: dissolved and nanobubbles

Moleaer's Patented Technology

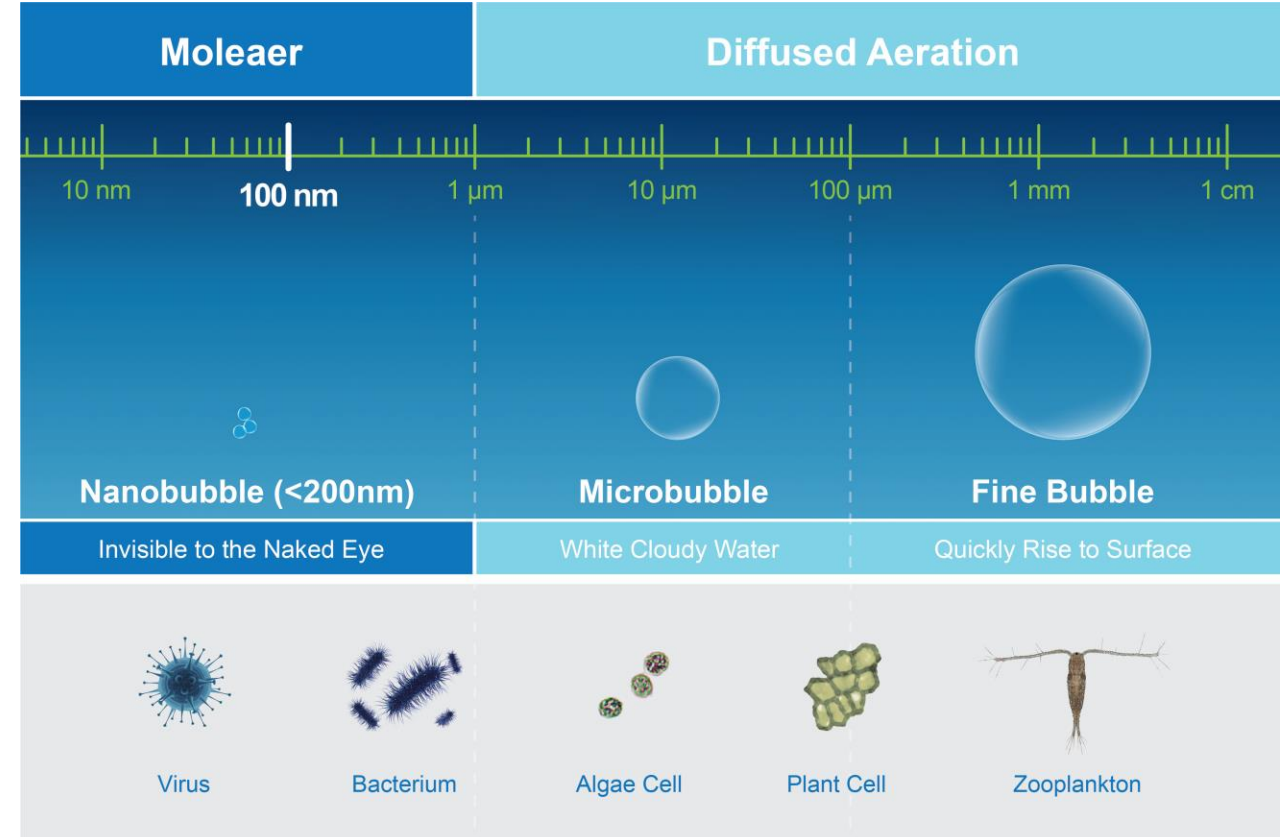
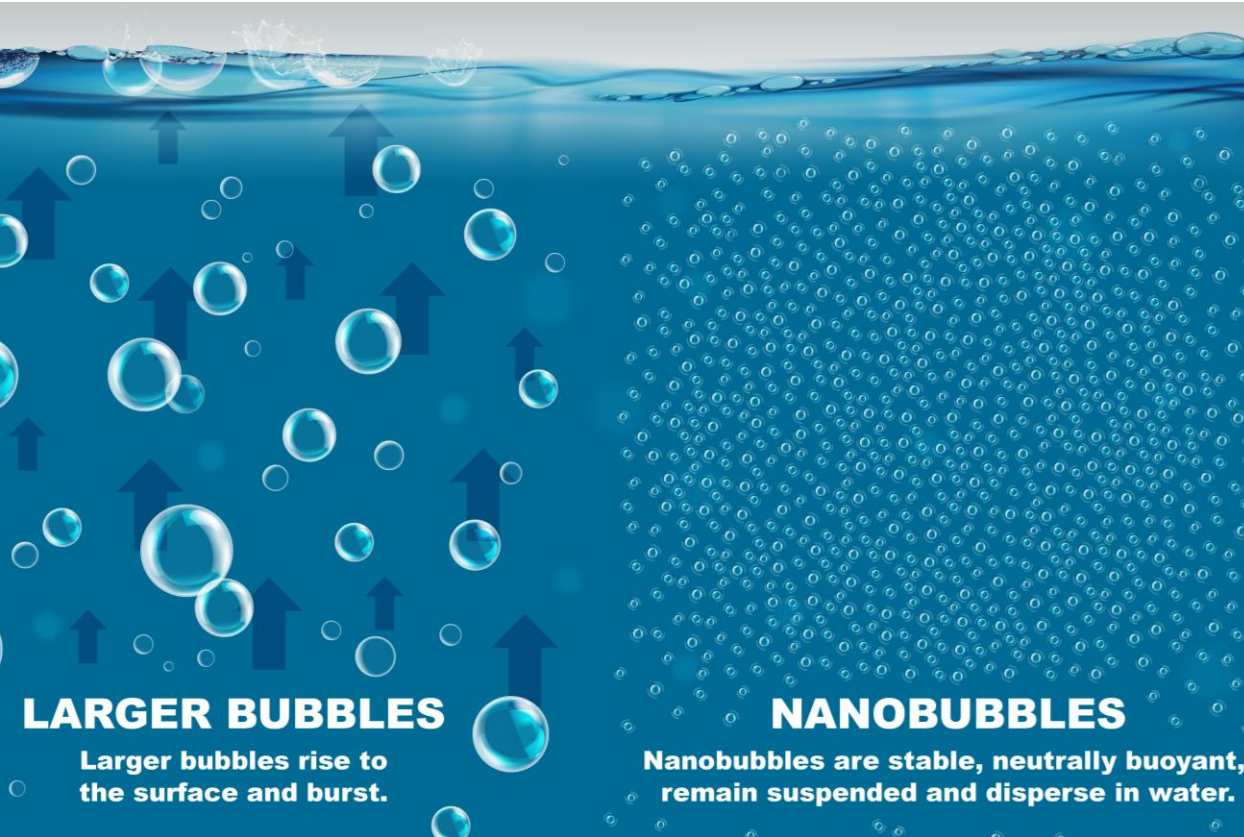
Compressed gas is diffused into flowing water from 10-to-4500 GPM in our Nanobubble Generator forming 200M-to-1B nano-sized bubbles/ml



Robust, scalable, easy-to-install, technology with best-in-class over 85% oxygen transfer efficiency

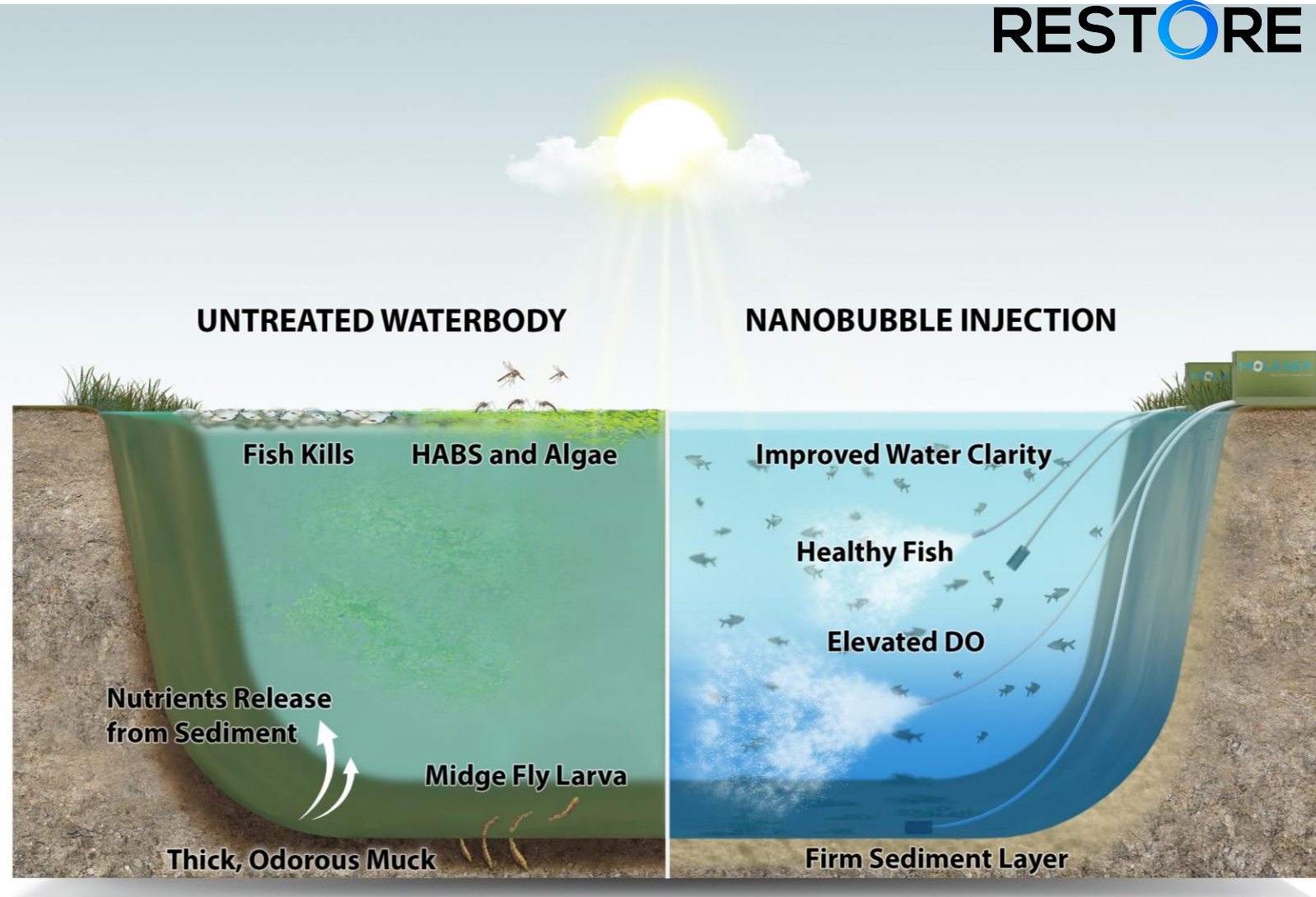
What are Nanobubbles?

Nanobubbles are neutrally buoyant, nano-size bubbles, 2500x smaller than a grain of salt



Efficient Oxygenation

- Independently validated >85% gas transfer SOTE
- Stabilized oxygenation with nanobubbles

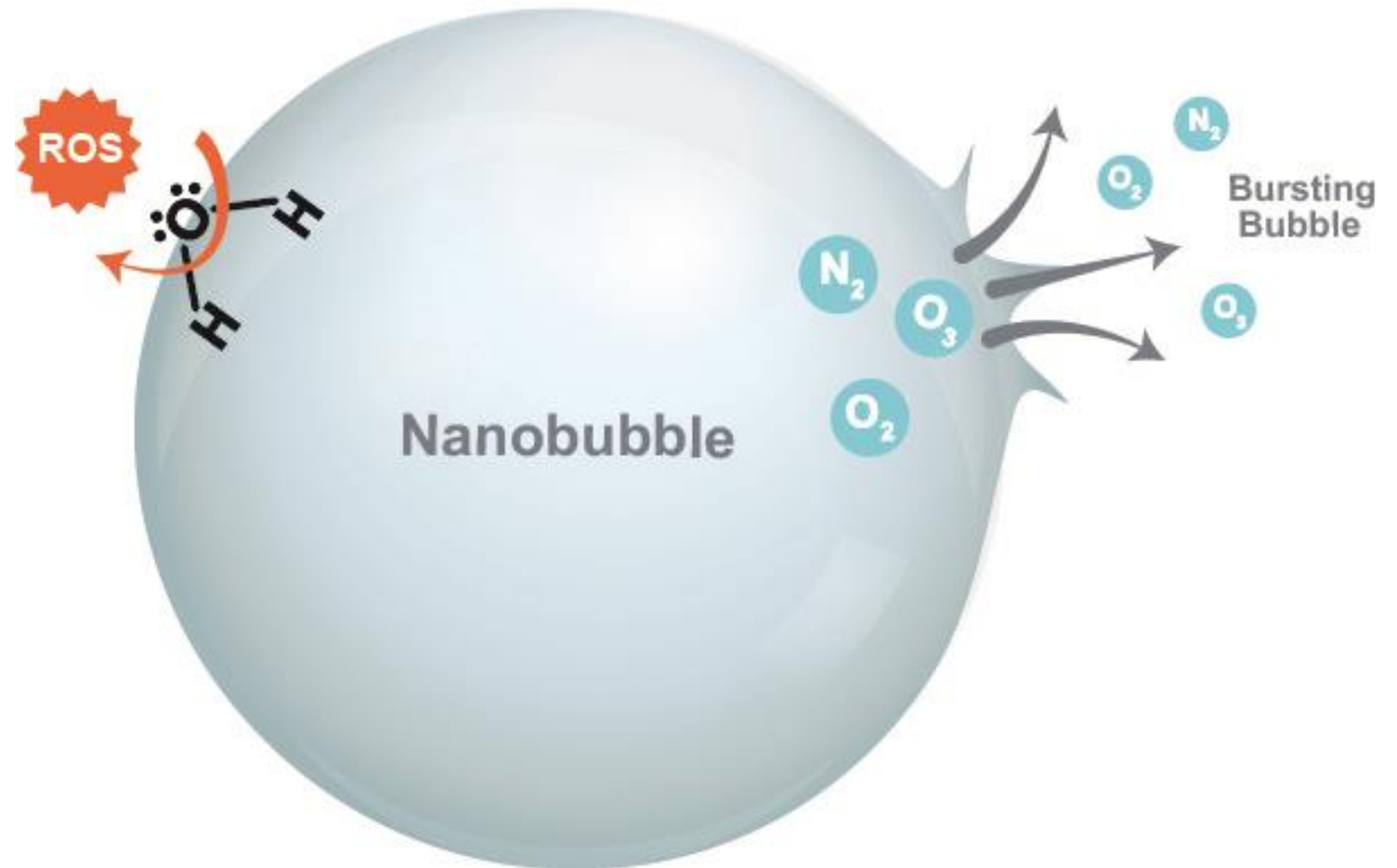


Natural Oxidation

- Independently validated hydroxyl radical formation
- Naturally oxidize pathogens, bacteria, iron and biofilm

Nanobubble Oxidation

When the bubble is destabilized due to UV light, sonication, rapid pressure changes, the bubble collapses and ROS is generated.



Moleaer's Nanobubble Generators

System Sales from 40 to 5000+ GPM



Why Nanobubble Technology?

The Foundational Piece for Your Lake Treatment Plan



Proactive & Restorative Tool

- Complementary to other tools
- Proactively targets the root cause of your lake's problems to reduce and prevent from occurring
- Increases natural lake processes like muck digestion
- Promotes healthy fish and aquatic plants



Easy to Install & Maintain

- Simple installation that doesn't require ecosystem disruption or heavy equipment
- Unit is shore-mounted and quiet during operation
- Regular clean-in-place nanobubble generator cleaning



Reduce Chemical Usage

- Nanobubbles are natural and don't require chemical applications
- Because they target common problems, they help reduce the reliance on chemical applications
- Nanobubble generators can run continuously

Sustainable Lake Management with Nanobubbles

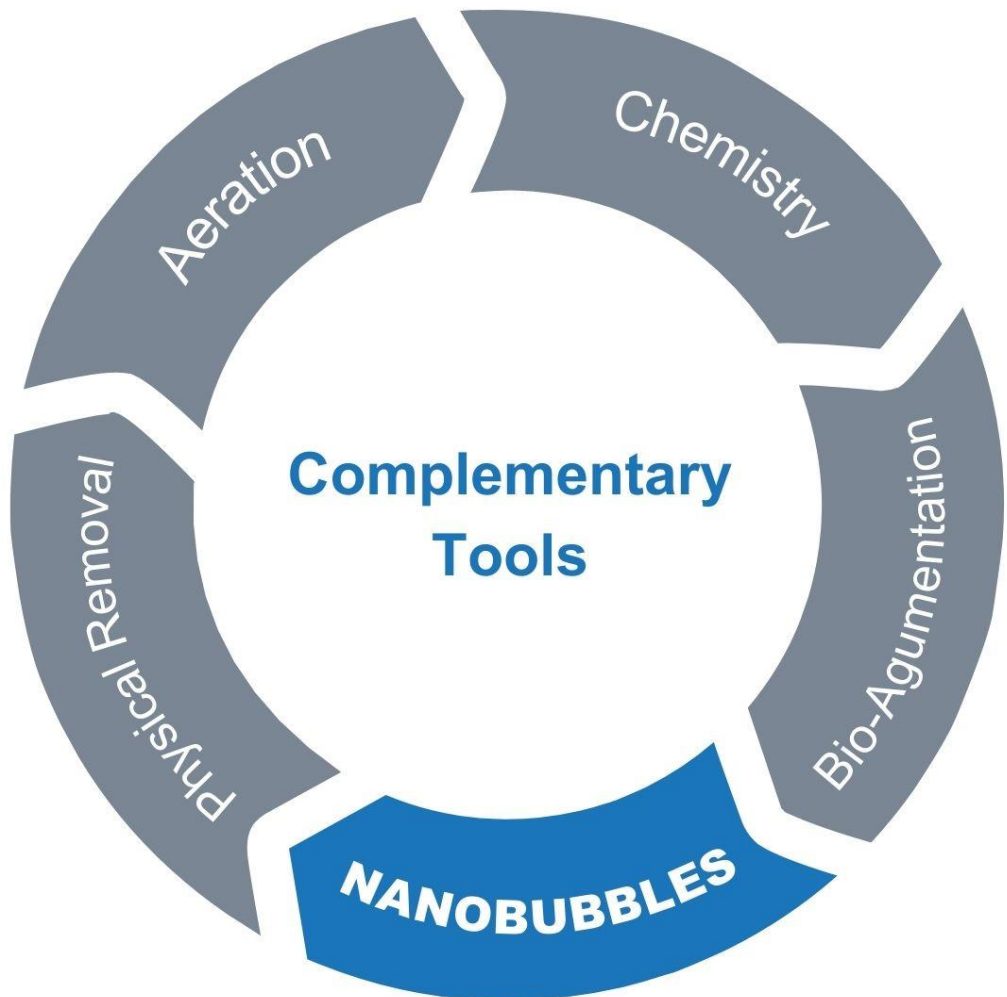
The goal of a sustainable lake management plan is to select a combination of preventative and proactive tools before moving to reactive ones

Nanobubbles:

- Restorative and proactive tool to complement an IPM strategy
- Helps lake managers reduce reactive treatments like chemicals
- Reduce the need for more intrusive methods to remove muck



The RIGHT TOOL at the RIGHT TIME in the RIGHT PLACE



Selecting the right tool or tools is important for an effective and sustainable lake management plan

Nanobubbles:

- Complement your existing lake management tools like aeration and bio-augmentation
- Improve the effectiveness of chemicals and bio-augmentation
- Support efficient gas transfer into the sediment layer
- Provides 24/7 treatment to address the root cause of many lake quality issues

Why We Chose Moleaer

- Patented technology
- Pioneer and global leader in nanobubble technology
- Third-party validation

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Research Validation



2016

Founded in Southern California & patented nanobubble technology



2017

First Commercial Nanobubble Generator Launched



2020

Moleaer is awarded Adapted Irrigation Solution of the Year



2021

Moleaer is awarded Best Crop Enhancement and Yield Improvement



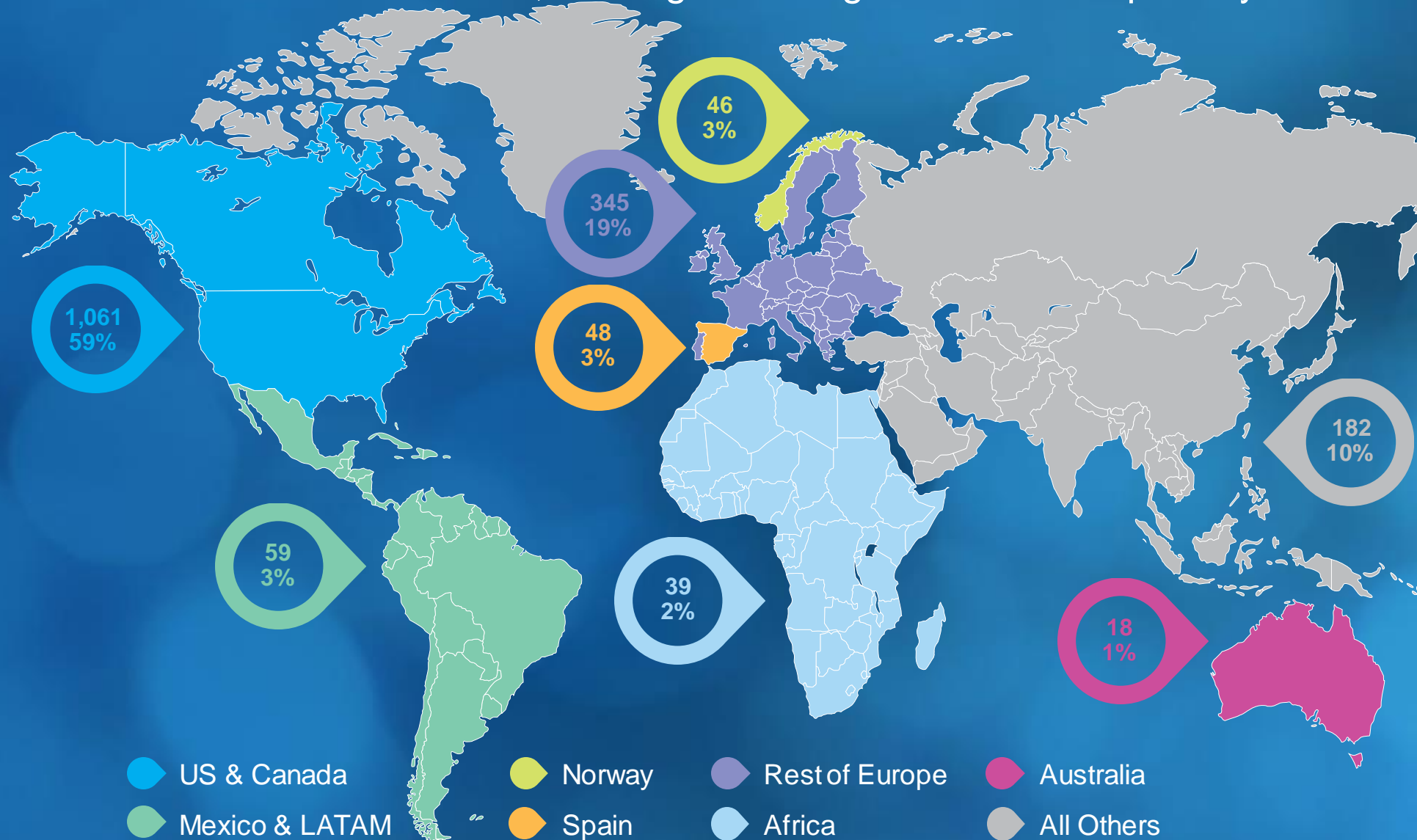
2022

Moleaer received: Global Cleantech 100 Company, Impact Award, Distinction for Water Project of the Year at Global Water Awards, and Fast Company Next Big Things in Tech



The Global Leader in Nanobubble Technology

>2200 installations worldwide, treating over 1B gallons of water per day



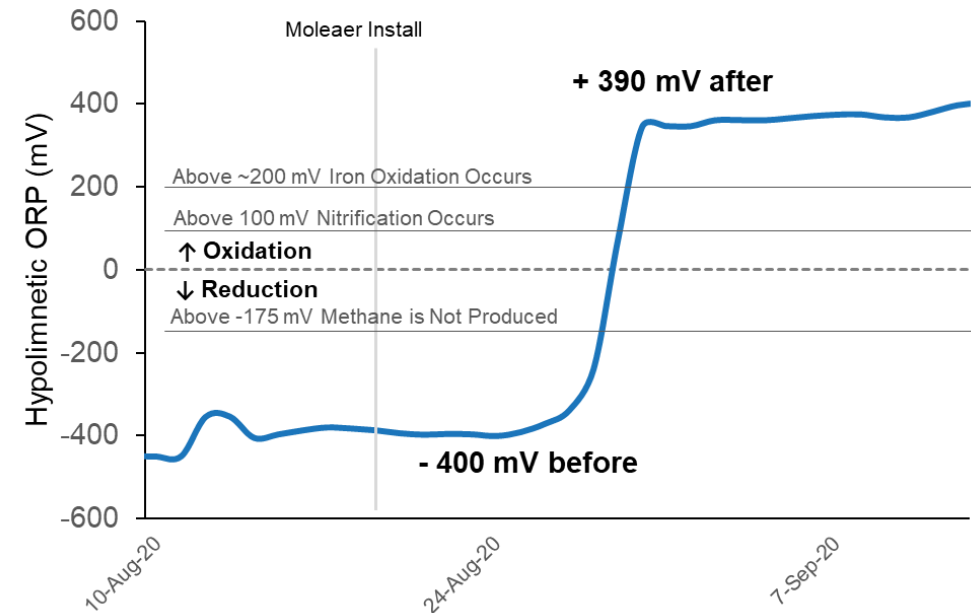
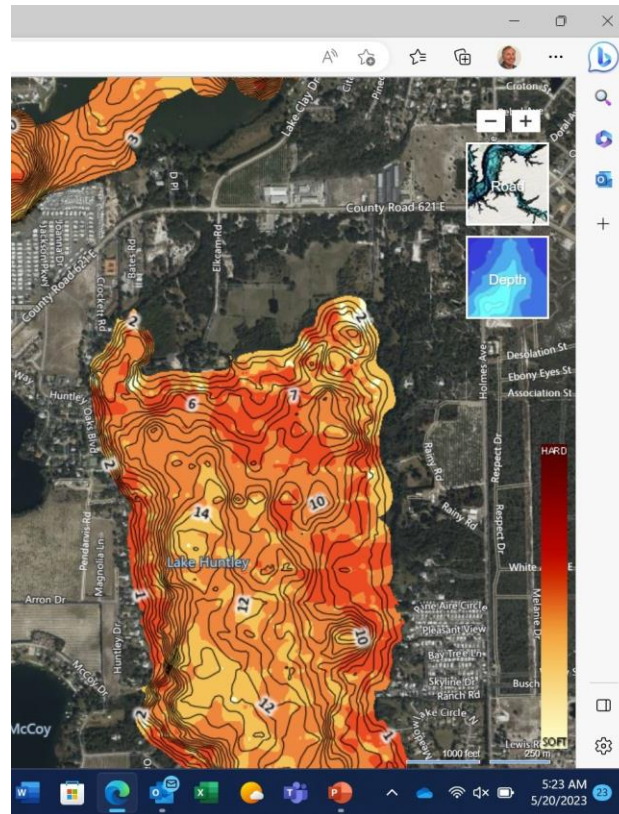
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Measure for Success

- Change in muck thickness by nanobubble treatment
- ORP – nanobubbles create a mild oxidant
- Ammonia and Iron affected

- Bio-Base to measure change in organic soft bottom
- Increasing Oxidation Reduction Potential (ORP) levels that influence Nutrients



Westin Hapuna Koi Pond

Location: Hawaii, HA, USA

Specifications:

- Unit: Kingfisher
- Koi pond

*“We have been using Moleaer's nanobubble generator here at the Westin Hapuna Beach Resort since March 2022, and it has been a game changer! **We have been absolutely thrilled with the improvements to the health of the plants and fish.** After just a short time, the clarity in the pond increased dramatically which has translated into a better experience for our Resort guests, and the fact that it is an all-natural treatment is an added bonus!”* – Marguerite Heap, Hotel Manager



Private Golf Club: Algae & Odor Reduction

Location: Vero Beach, FL, USA

Specifications:

- Unit: Clear 150 & Kingfisher
- Lake Size: 2.87 acres, 14.35-acre feet

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Results:

- Reduced algae growth
- Improved water clarity
- Eliminated foul odors



“Nanobubble technology is a sustainable and chemical-free tool for lake managers to utilize to restore lake health for our clients. By getting at the root cause of common lake issues, we can naturally improve water quality, allowing our clients to enjoy their lakes and ponds once again.” - Rick Anderson, the owner of Aquatic Balance

Lake Theresa: Reduced Nutrients

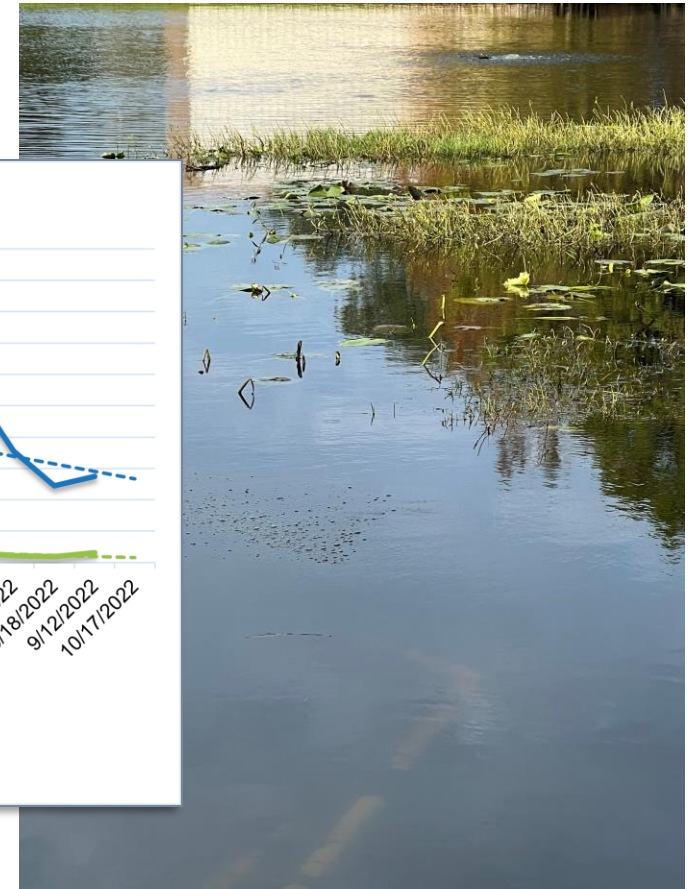
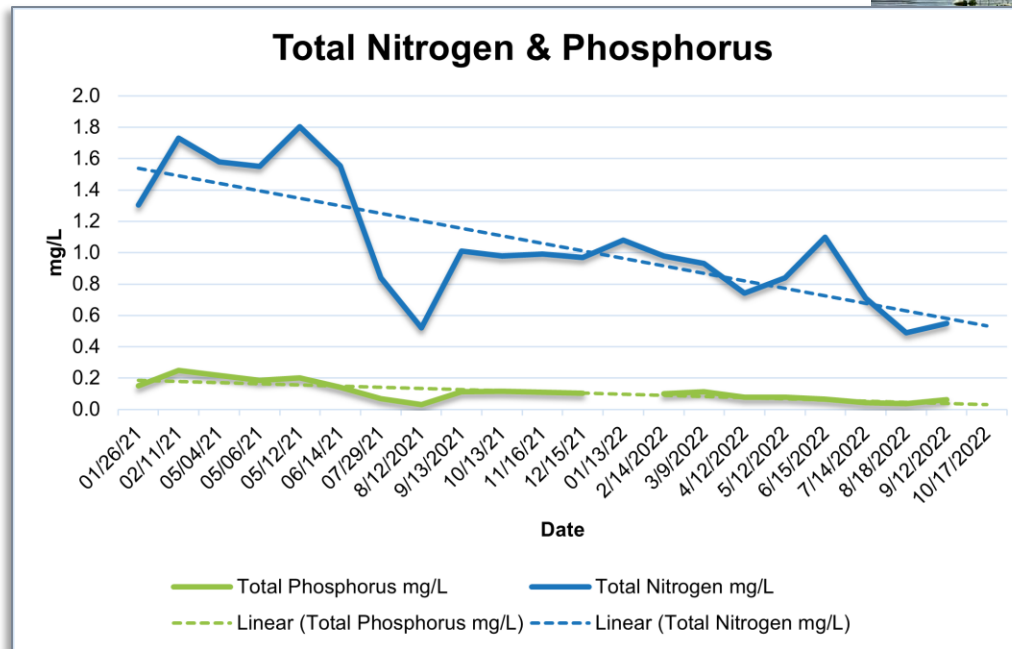
Location: City of Orlando,
FL, USA

Specifications:

- Unit: Clear 150
- Lake Size: 1.1 acres, 6-acre feet

Results:

- Reduced Total Nitrogen and Phosphorus
- Improved water clarity
- Less maintenance effort



The Sands Coastal Community Lake: Eliminated Fish Kills

Location: Fort Pierce, FL,
USA

Specifications:

- Unit: Clear 150
- Lake Size: 15 surface acres, 150-acre feet, Maximum 20 feet deep

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Results:

- Eliminated fish kills
- Reduced midge fly outbreaks
- Better water quality and clarity
- Improved discharge quality into surrounding ecosystems



Private Trout Pond: Reduce Algae Blooms

Location: Tomah, WI, USA

Specifications:

- Unit: Clear 50

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Results:

- Water clarity improvement
- Algae bloom reduction
- Reduced gill lice parasites in trout



“The results from the nanobubbles were much faster than I would have expected. As a chemical engineer who specifies equipment as part of my job, I am also impressed with the quality of the design and build of the generator. I am happy with my local technical representative, with Moleaer as a company and with my results. The trout are healthier and the water quality is fantastic. I’m thrilled with all of it. The investment was worth every penny.” – Gregory Eirschele, Lake Owner



Case Study: Channel Remediation

- **50,000 GPM treatment capacity equaling 60M gallons of water per day**
- **Date of Installation: October 2021**

Challenges

- Low oxygen levels in water channel
- Hydrogen sulfide (H₂S) gas production
- Rotten egg smell

Results

- Elimination of H₂S formation and related odor
- Increased dissolved oxygen
- Digested organic sediments



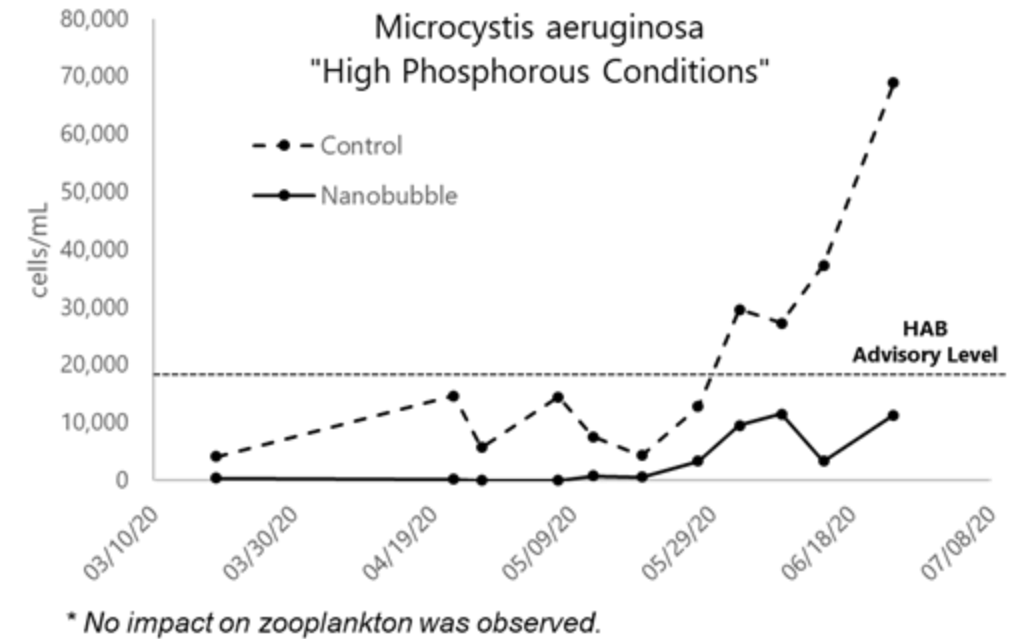
University Study: Algae Control

Location: University of Georgia Aquaculture Unit

Purpose: Algae control
Nanobubbles were compared to control ponds to study reduction in Microcystis (HAB)

Key Findings

- Reduced growth of blue-green algae (Microcystis)
- High-nutrient concentrations in control
- No impact on zoo plankton was observed



SOURCE: Burtle, Gary "Oxygen and Phytoplankton in Earthen Ponds Treated with Nanobubbles: Preliminary Report 8/12/2020", University of Georgia. 2020.

Case Study: Algae Control

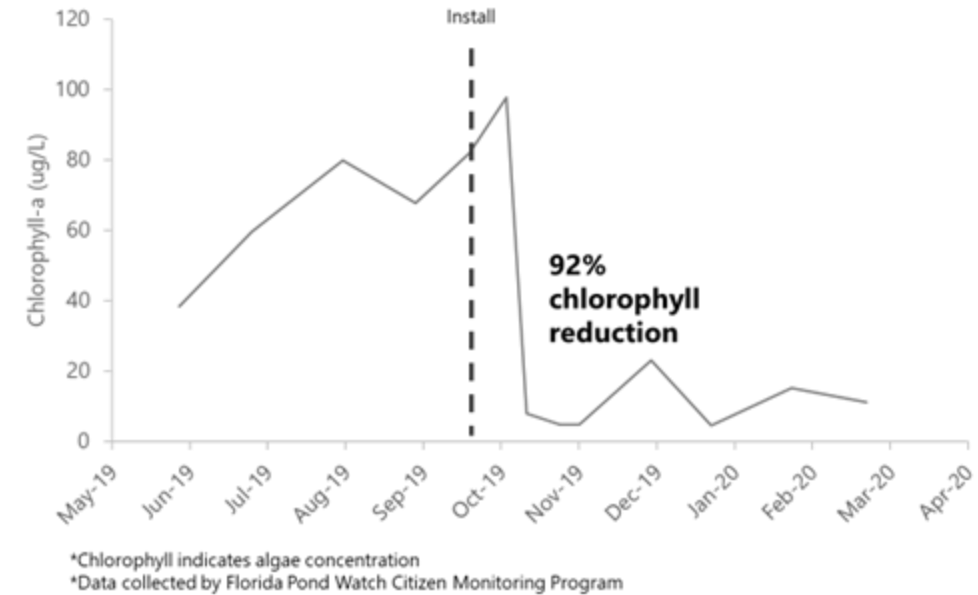
Location: 26-Acre
Community Lake in Fort
Myers, FL

Purpose: Algae Control

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Key Findings

- 92% chlorophyll reduction within weeks of installation
- Reduced algae growth (Microcystis & Lyngbya)
- Improved fish environment
- Increased water clarity



Before Moleaer Installation



1 Month After Moleaer Installation



Case Study: Irrigation Reservoir Treatment

Location: Ontario, Canada

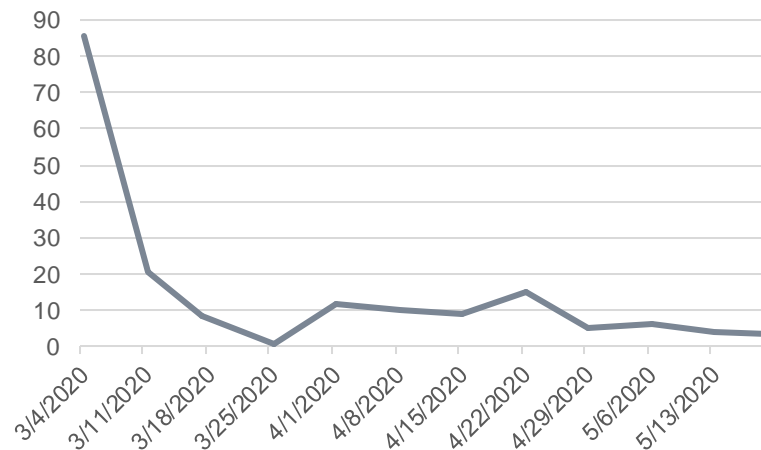
5 Million Gallon Irrigation
Reservoir Treatment

Key Findings:

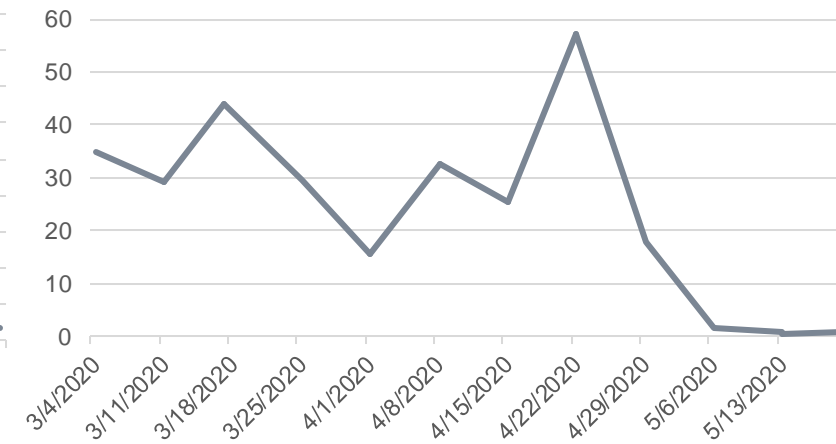
- Significant improvement in water clarity resulting in better filtration
- 50% higher H₂O₂ residual

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Turbidity (FNU)



Chlorophyll (µg/L)



Case Study: Irrigation Water Treatment

Location: Spain, 8 Million
Gallons

Treatment Targets:

- Algae Control
- Filtration Efficiency
- Chemical Treatment Reduction

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Media Filtration

- Less Backwashing
- Less Downtime

Chemical Treatment

- Less Chemistry
- More Residual
- Better Treatment & Sanitation

UV Treatment

- Better Transmission Value
- Less Fouling & Scaling
- Lower Energy
- Improved Sanitation



Blueberries: Algae & Biofilm Control

Location: Jalisco, Mexico

Application: Hydroponic in pots with individual drippers under macro tunnels

Reservoir Size: 6000 m³

Water Source: Well

Unit: Neo 250 O₂ installed on the reservoir

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Challenges:

- Algae in the reservoir
- Clogged drippers each cycle
- Low DO levels in water and soil
- Constant use of sulfur burner for pH control

Results:

- Reduced algae in the reservoir
- Less dripper clogging
- Water DO increased from 0.01-1.5 ppm to consistently above 10 ppm
- Lowered need to use sulfur burner for pH control



Case Study: Irrigation Reservoir Algae Control

Location: Chile, 1 Million Gallons

Treatment Targets:

- Algae Control
- Filtration Efficiency
- Pathogen Control

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Results:

- Dramatic reduction in algae concentrations was observed after 45 days of treatment
- Water clarity improved significantly
- Customer experienced significantly better irrigation system hygiene
- Filtration was improved with less plugging and back flushing
- Emitters experienced less blockages which resulted in better irrigation uniformity



Case Study: Irrigation Reservoir Treatment

Location: Chile, 2 million
gallons

Treatment Targets:

- Algae Control
- Filtration Efficiency
- Pathogen Control

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Plant Health

- Less Root Disease

Media Filtration

- Less Backwashing
- Less Downtime

Irrigation System Hygiene

- Less Biofilm
- Less Blockages
- Better Irrigation Uniformity



High Flow In-line Installation Example:

Location: Western United States

Size:
4500 gpm Titan NBG 8

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High Flow Installation Example:

Location: Eastern United States

Size:

2 x 4500 gpm Titan NBG 8
in series with 2 x O₂ gen

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**Two Nanobubble
Generators in series**



High Flow Installation Example:

Location: Western United States

Size:

1 x 3600 gpm Titan NBG 6
with rental pump

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Thank You

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