

# NANOBUBBLE TECHNOLOGY REDUCES MUCK AT FORMER QUARRY LAKE



## Client Case Study: Those Blasted Things

<b>Location:</b>	<b>Lake:</b>	<b>Unit Type:</b>	<b>Results:</b>
Minnesota	30 acre-feet former rock quarry lake	1000 GPM Nanobubble Generator with Oxygen and Ozone Generators	<ul style="list-style-type: none"> <li>• Improved water clarity</li> <li>• Reduced muck</li> <li>• Firmer sediment</li> <li>• Less algae</li> </ul>

Vance Walgrave from Those Blasted Things owns and manages a private 30-acre-foot lake that used to be used for rock quarrying. Over the past 5 years, the lake had poor water quality, with little to no clarity, a thick layer of muck and regular algae blooms both on the surface and throughout the water column due to manure that ran into the lake.

To help target the root cause of these problems and improve the water quality, Vance sought a sustainable and effective tool that could complement his lake management plan.

He turned to Moleaer's nanobubble generators, installing a 1000 GPM nanobubble system with oxygen and ozone generators powered by a diesel generator.

Nanobubble technology offers a chemical-free way to target common lake problems by addressing the root cause of poor lake health. Through efficient oxygenation and natural oxidation, nanobubbles increase dissolved oxygen through the water column and into the sediment layer and help increase natural muck digestion. This results in clearer lakes and ponds, firmer sediment and healthier ecosystems.

Injecting ozone into the nanobubble system allowed for quicker improvements since Vance opted for a short-term rental to address his lake's health concerns.

After a few short weeks, Vance noticed his lake's color change from algae green to a clearer brown color. He also regularly checked the muck layer with a pole.



Figure 1: Walgrave explaining the depth of the muck layer before nanobubbles.

"We've been using this pole to check what's down in the bottom and originally, there was over one-foot-deep jelly layer with hard sediment down below. Now, the jelly seems to be hardening up and the jelly part has shrunk," states Vance.

During the 5-week short-term rental, Moleaer technology drastically reduced the thick muck layer, improved water clarity, decreased algae and increased the dissolved oxygen concentration throughout the water body.



Figure 2: A 1000 GPM nanobubble generator with both oxygen and ozone generators were installed on the lake.



Figure 3: The installation required a trailer pump for accessibility to the waterbody.

