



EVERBLUE  
LAKES

## Lake Restoration – Lessons from the Front Lines

September 2021

*Keep Lakes Natural*





# Our Mission

**To develop and implement Natural Solutions that make lakes healthier – now and for generations to come...**

***“When you give a lake what it needs to stay healthy, weed; muck and algae problems naturally disappear”***

*Keep Lakes Natural*





# Our Track Record

## 2010 – 2020 Lake Restoration Projects

- ▶ Little Lakes, Frankfort, Indiana – 30 acres
- ▶ Lake Greeley, Greeley, PA – 150 acres
- ▶ Turnberry Lakes, Village of Lakewood, IL – 100 acres
- ▶ Keeler Lake, Decatur, Michigan – 80 acres
- ▶ Austin Lake Portage, MI – 225 acres
- ▶ Indian Lake Dowagiac, MI – 500 acres
- ▶ Paradise Lake, Carp Lake MI – 400 acres
- ▶ Schmidt Lake, Plymouth, MN – 40 acres
- ▶ Pickerel Lake, Scots, MI – 140 acres
- ▶ Phipps Lake, Ortonville, MI – 80 acres
- ▶ Kassuba Lake, Gaylord, MI – 40 acres
- ▶ Paw Paw Lake, Watervliet, MI – 200 acres
- ▶ Sherman Lake, Richland, MI – 160 acres
- ▶ Sand Lake, Grant, MI – 80 acres
- ▶ Crooked Lake, Texas Township, MI – 200 acres
- ▶ Lake Heritage, Gettysburg, PA – 150 acres
- ▶ Lake Tyrone, Fenton, MI – 120 acres
- ▶ Lake Ocie, MO – 60 acres
- ▶ North Lake, Grand Junction, MI – 60 acres
- ▶ Waumegah Lake, Clarkston, MI – 100 acres
- ▶ Duck Lake, Highland, MI – 250 acres
- ▶ Devils Lake, Lincoln City, OR – 750 acres
- ▶ Lake Carmi, Franklin, VT – 1400 acres
- ▶ Buffalo Reservoir, CO – 20 Acres
- ▶ Golf View Lake, IL – 30 Acres
- ▶ Tommys Lake, MI – 60 Acres
- ▶ Lake Pocotopaug, CT – 500 acres
- ▶ Lake Hopatcong, NJ (Pilot) – 70 acres
- ▶ Lake LeeAnn, MI – 500 Acres

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# Our Track Record

## 2010 – 2018 Reservoir Restoration Projects

- ▶ Lake Bridgeport Reservoir Fort Worth, Texas – 700+ acre treatment area
- ▶ Lake Benbrook Reservoir Fort Worth Texas – 800+ acre treatment area
- ▶ Toa Vaca Reservoir, Villalba, Puerto Rico – 800 acres
- ▶ Upper Tarrytown Reservoir, Tarrytown, NY – 30 acres
- ▶ Massabesic Reservoir, Manchester, NH – 225 acres
- ▶ Bear Gulch Reservoir, Atherton, CA – 45 acres
- ▶ Wenham Lake – Salem & Beverly Water Supply, Beverly, MA – 245 acres
- ▶ Glenmere Lake – Village of Florida Water Supply, Florida, NY – 150 acres
- ▶ Lake Reidsville – City of Reidsville Water Supply, Reidsville, NC – 230 acres

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# Harmful Algal Blooms – Our Lakes in Crisis

**DANGER**

**LAKE CLOSED**  
due to toxic algae

**KEEP OUT  
OF LAKE**

Call your doctor or veterinarian if you or your animals have sudden or unexplained sickness or signs of poisoning.



## There are only three things you need to know about Lake Management...

- ▶ **Nutrient Reduction**
- ▶ **Nutrient Reduction**
- ▶ **Nutrient Reduction**



## Sources of Lake Nutrients

**Runoff/leaching  
from the watershed**



**Internal Loading  
from the compost  
pile at the lake  
bottom**







# Lake Restoration Toolbox

## External Loading Reduction

- ▶ Watershed Management
- ▶ Sewer Systems

## Internal Loading Reduction

- ▶ Dredging
- ▶ Nutrient Inactivation (Alum/Phoslock)
- ▶ Aeration/Oxygenation
- ▶ Biological Treatment
- ▶ In-lake Phosphorus Harvesting (new/emerging)





## What to Do?....

- ▶ Follow the Data and Science on where to start for the biggest impact the fastest
- ▶ **MEASURE** the impact on nutrient levels and lake health



## Evaluating In-Lake Solutions

**Alum/Phoslock**

**Dredging**

**Alum/Phoslock and dredging do what they advertise. However, they are cost prohibitive ONE- TIME solutions to a continuous problem.**





## EverBlue Toolbox... Alum/Phoslock Alternative



- ▶ **AquOm Water Polymer Solutions... a much lower cost alternative to Alum and Phoslock – in testing**

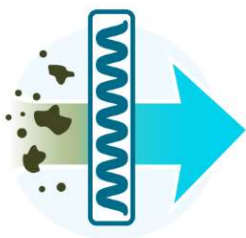


# EverBlue Toolbox

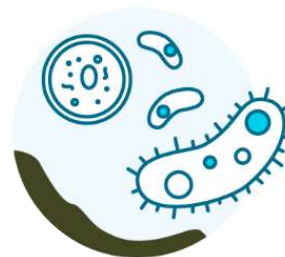
**AerForce Lake Aeration™**



**Smart Watershed Management™**



**BioBlast™**  
**Biological Treatment**



**Phosphorus Harvesting**  
**Floating Treatment Wetlands**







## AerForce Aeration – What's Different?

- ▶ New Patented Diffuser Technology
- ▶ New direct oxygen injection capability
- ▶ Scalable for large lakes.
- ▶ Proven to oxygenate to the lake-bottom sediments.
- ▶ Quiet and aesthetically appropriate for lake settings.





# AerForce Aeration In Action

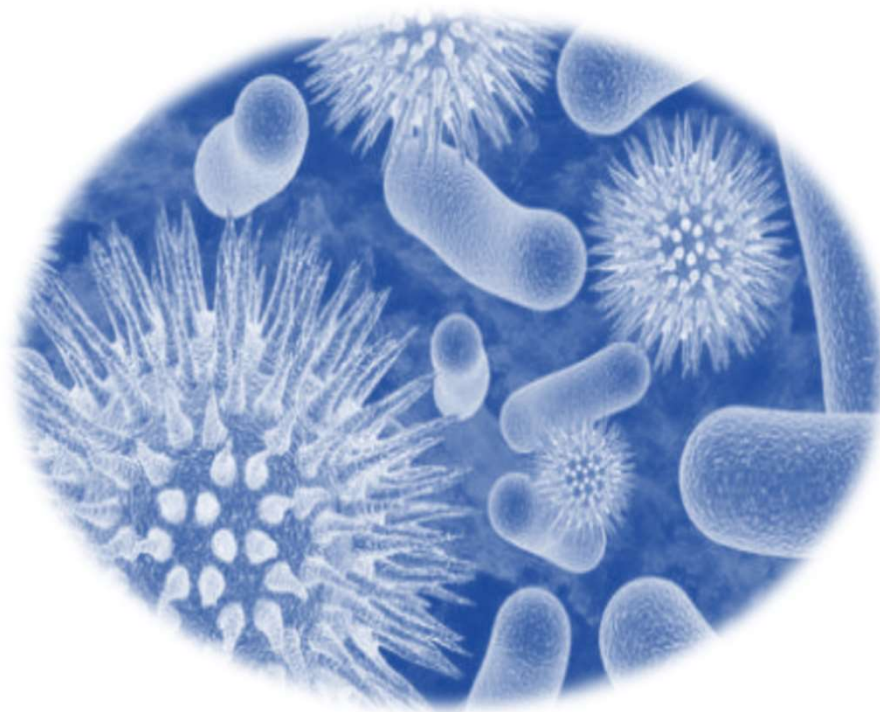






## BioBlast– What's Different?

- ▶ Scalable for large lakes.
- ▶ Delivers orders of magnitude more beneficial treatment than off-the-shelf formulations.
- ▶ Costs pennies per gallon of treatment.





# BioBlast In Action

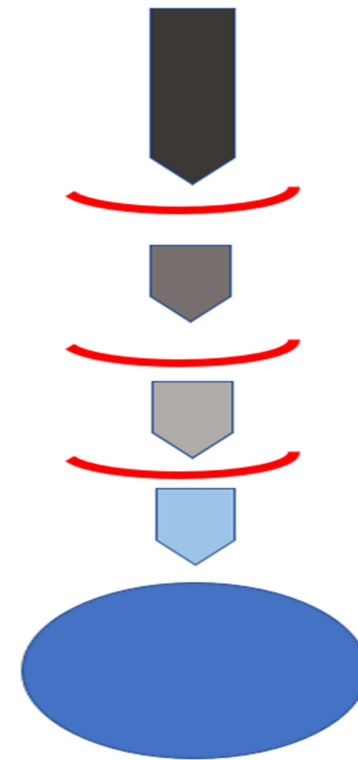






# Smart Watershed Management– What’s Different?

- ▶ DOES NOT replace the need for a comprehensive watershed management strategy.
- ▶ Focuses on “last mile” filtration solutions for drains and small inlets.
- ▶ Delivers results while larger scale watershed improvements are in development.





# Smart Watershed In Action







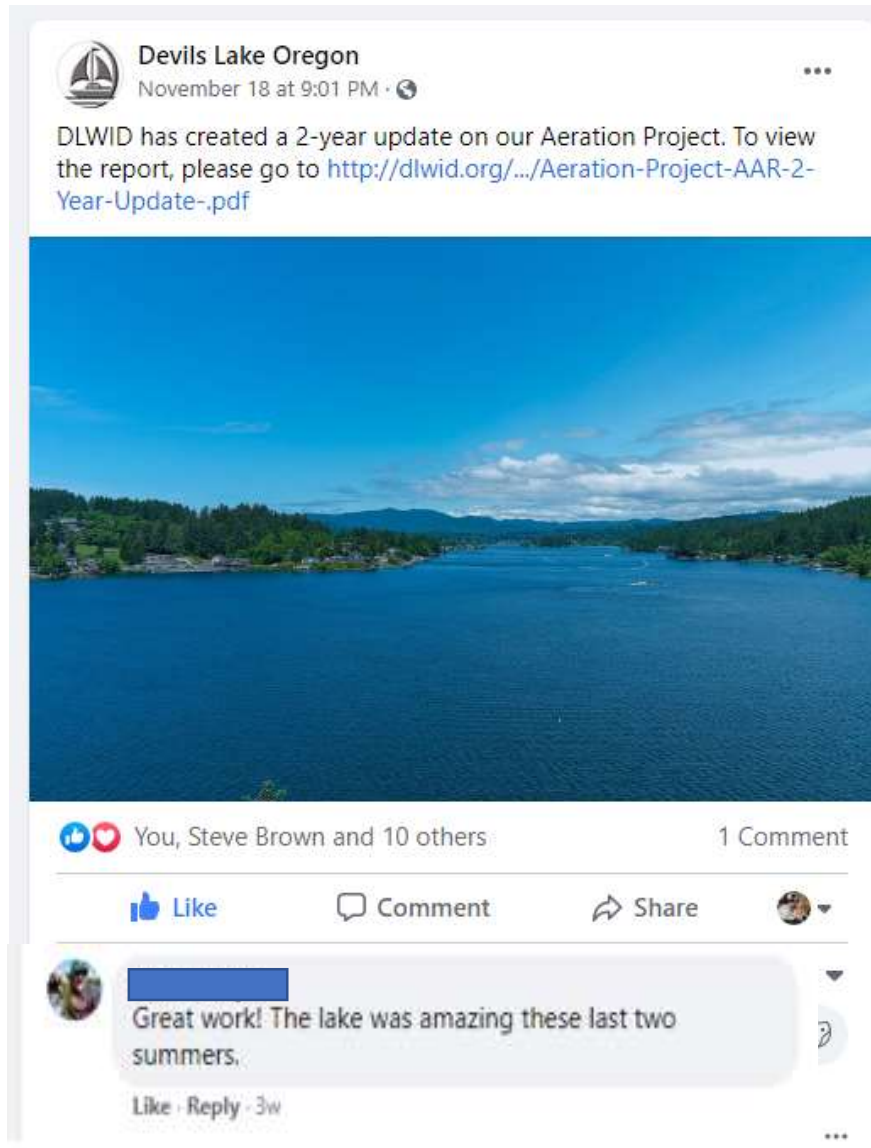
# In-lake Filtration and Phosphorus Harvesting – What's Coming?

- ▶ **A Partnership with Floating Islands International.**
- ▶ **Combining active floating treatment wetlands with absorptive Phosphorus Media to filter and remove Phosphorus from lakes.**





# Devils Lake Oregon



## Devils Lake 2015



Photo: Paul Christiansen/The NewsGuard

## Devils Lake 2020



Photo: DLWID Staff





# Lake Pocotopaug East Hampton, CT



## Lake Pocotopaug Project

September 17 · 🌐

Finally some positive press for our lake! Thank you to Chuck Yenker for sending this in and to everyone who helped make this happen, including Everblue Lakes, our town officials and parks and rec- every single person involved ❤️

Cheers to an even better summer next year!

#everbluelakes #lakepocotopaugproject #ctlakes #easthamptonct



Last year our beautiful lake was closed early- in July. This year, thanks to so many people we were able to enjoy it all summer! Thanks to town officials, many people who championed a solution, and to the people who attended the meetings and sent emails.

Like · Reply · 12w



This is awesome the lake remained open even with this years hot summer. The solution is working and worth every penny being spent.

Like · Reply · 11w



Bravo! Thank you to everyone that made this possible. Enjoying the lake everyday.



Like · Reply · 11w





## Grand Lake St. Marys, Ohio

