Aeration

A good pond aeration system will provide a wide range of benefits to the ecosystem of your pond. The majority of ponds will gain from the addition of aeration as it will improve and preserve the correct water quality, boost oxygen levels and eliminate water stratification. Here is a video that describes how an Aeration system functions

Aeration Improves Pond Water Quality

An aerator will improve the water quality as it circulates the water and increases oxygen. If your pond water is oxygen-deprived it will result in an unhealthy amount of bacteria that will cause water quality issues.

In addition to restoring oxygen levels in your pond aeration will remove carbon dioxide, stabilize the pH levels and reduce alkalinity.

Aeration Helps Eliminate Excessive Algae

Pond aeration is a sustainable solution to the problem of algae blooms, while many will use chemical treats to deal with the issue this is only a short term solution as the algae will grow back.

Using an aerator to reduce algae is a two-step attack. Firstly an aeration system will circulate and disrupt the algae spores towards deeper pond areas. This means that time is decreased when they are exposed to sunlight, giving them less time to grow.

Secondly, a requirement of algae blooms is phosphorus, the added oxygen through aeration leads to the phosphorus binding with iron and then falling to the sediments at the bottom of the pond where it is unusable as food by the algae.

Aeration Helps With The Overall Destratification Of your Pond

The temperature of the water in a pond can be inconsistent, the surface water that is exposed to sunlight will be warmer while the deeper water will be cooler the transition layer between the two is called the thermocline.

Not only do they have different temperatures but also different oxygen levels. This thermal stratification can result in inefficiency in the ecosystem and in worst-case scenarios can result in fish kills.

Aeration

To prevent this from happening an aerator will circulate the water and it becomes mixed so these stratified layers are eliminated. The colder oxygen-deficient water below is circulated to the surface while the surface water richer in oxygen goes to the bottom helping in the growth of beneficial bacteria.

Aeration Is Beneficial in the Winter

An aerator system is as equally important in the cold winter months as it is in the summertime. During the winter months, oxygen supply is greatly reduced especially when the pond becomes iced over.

When ice covers a pond it limits the sunlight reaching the aquatic plants. If they die from lack of sunlight they begin to decompose using oxygen that is dissolved in the pond water.

Even though fish need less oxygen in winter if it is severely depleted fish will die in large numbers this is known as winter fish kill.

Additionally in winter decaying matter will sink to the bottom of the pond where it rots and releases carbon dioxide and other toxic gases. If these gases are trapped they can prove toxic to fish.

In winter an aerator will create a hole in the ice which allows the toxic gases to escape, the aerator will also pump oxygen into your pond.

Aeration Reduces Mosquito Activity

As mosquitoes need still water to breed and lay their eggs a pond is the ideal breeding ground for them. an aerator is a natural solution for mosquito control by creating a constant flow of water in a pond, the mosquitoes are not able to breed.

A secondary benefit of the aerator in this aspect is that oxygenated water will help your fish to thrive and produce more fish to eat any larvae still present on the water surface.

Aeration Removes Foul Pond Smells

The main cause of foul pond smell is usually because it lacks water aeration, if your pond has a rotten egg smell this is very likely caused by a buildup of hydrogen sulfide gas.

Aeration

It is usually an early indication that there is an imbalance in the pond ecosystem. an aerator will oxygenate and circulate the water reducing the foul odors greatly.

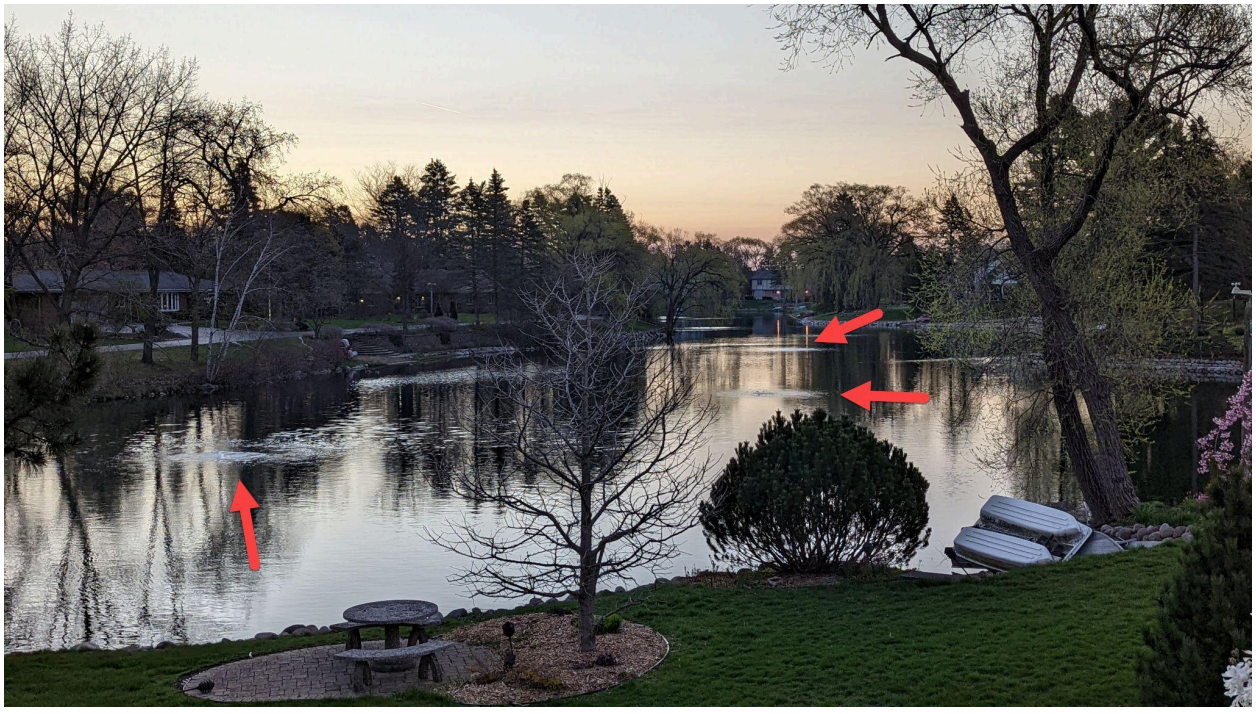
Aeration Reduces Bottom Sediment

When oxygen levels are low organic matter takes longer to decompose this accumulation of bottom sediment in your pond will result in it having to be dredged.

The circulation and oxygenation provided by proper aeration will reduce this accumulation of sediment by allowing it to decompose faster. This should prolong or prevent a need for dredging your pond.

Final Thoughts

Now you have discovered just how important an aerator is for your pond from improving water quality and to prevent fish kill in Summer and Winter. It can also eliminate algae bloom and stop your pond from smelling bad as well as reducing mosquito activity.



The only visible evidence of the Aerators are bubbles on the surface. The background noise of the surrounding community overwhelms what little sound the pumps make.