

The Importance of Lake and Pond Aeration for an Aquatic Ecosystem



Did you know that roughly [20% of the 50,000](#) lakes, streams and ponds surveyed by the Environmental Protection Agency had evidence of phosphorus and nitrogen pollution?

These types of pollutants indirectly cause lakes and ponds to have diminished oxygen levels. In effect, this destroys wildlife diversity, increases mosquito activity and ruins your overall water quality.

So what is the solution to this problem?

One simple fix is pond aeration, a process that increases the amount of dissolved oxygen in the water. But how does pond aeration help lakes and ponds? Is it that important?

In this article, we will answer these questions and many more. Let's get started!

How Do Pollutants Deplete Oxygen In Lakes and Ponds?

[The main way](#) that pollutants like phosphorus and nitrogen get into our water sources is through

farm runoff. The chemicals are used in fertilizers and pesticides that are put on the crops.

When it rains, the pollutants are carried to streams, ponds, lakes, rivers and even the ocean. Often, when we picture an unhealthy pond or lake, we think of water covered in algae. But how are algae and fertilizer chemicals related?

Well, the chemicals cause algae that are naturally found in the water to bloom rapidly. Too much algae will result in the release of a massive amount of toxins into the water. This has a negative impact on the health of plants, fish and other water life.

When the algae dies it also uses up vast quantities of dissolved oxygen in the water. So, when you see water with lots of algae in it, it's usually a sign of oxygen depletion caused by pollutants.

Difference Between Aerators and Fountains

Often pond or lake owners will commonly use the terms fountains and aerators interchangeably. While the two devices do perform similar purposes, there are some key differences you should be aware of.

Fountains provide much less circulation than aerators, their main function is for appearance. They do circulate some water and provide oxygen; however, these benefits are limited to the surface area around the fountain.

Deeper waters and areas farther away from the fountain likely won't change at all. **Aerators**, on the other hand, provide circulation and increased levels of oxygen to all areas of the lake or pond.

If you care about fish and water quality, then invest in an aerator or an aerating fountain. If you only want a clean appearance, then a good fountain will get the job done; it will also give you an eye-catching water feature.

Why Is Lake and Pond Aeration Important?

Aeration doesn't simply improve the appearance of your pond or lake. It also provides a lot of other benefits for both you and the water. Lets check out five reasons why lake and pond aeration is so vital for an aquatic ecosystem.

Cleans Up the Water Quality

When there are depleted oxygen levels in a lake or pond, then the plant life and sediments begin releasing harmful gases and metals into the water.

This creates a negative feedback loop where the lack of oxygen causes oxygen to deplete even faster.

The gases don't just impact water quality and appearance. The hydrogen sulfide gases released produce an incredibly unpleasant smell for people around the water.

The circulation provided by aeration increases oxygen to all parts of the water, even the bottom sediments and plant life. It also mixes the water on the bottom which reduces the amount of hydrogen sulfide.

Slows Down Explosive Growth of Algae

As we mentioned, uncontrolled algae blooms are one of the main causes of oxygen depletion in ponds and lakes. These algae blooms are directly related to phosphorus runoff entering the water.

With proper aeration, the added oxygen makes the phosphorus in the water unusable for the algae to feed on.

Furthermore, the aeration pushes the algae spores toward the bottom of the water. This fact means they will get less sunlight, which will stunt their growth.

Provides Healthier Habitat For Fish

If you use your lake or pond for fishing, then you must take care of the population. Otherwise, a lack of oxygen will eventually kill off all of your fish. So, if you want to avoid having to introduce new fish to the water, then keeping water clean and healthy is crucial.

As we mentioned before, aeration improves water oxygen levels which fish need to survive. It also reduces the harmful gases that can kill them. However, another way that aeration helps your fish population is through destratification.

Stratification occurs when different layers of the lake are at different temperatures. This condition limits the areas a fish can swim.

Proper aeration makes the lake a more uniform temperature. As such, it allows the fish to

spread out more in the water and thrive in a larger habitat.

Reduces The Number of Mosquito's

To lay their eggs mosquitoes need completely still water. Because of this, unaerated ponds and those with little water movement are the perfect environment for hatching eggs.

That is the reason why communities located next to swamps and other still bodies of water suffer from a huge mosquito population.

Luckily, aeration creates constant ripples and flows in the water. As such, it kills the mosquito eggs and makes it a less desirable area for mosquitos. This greatly reduces the pest population in the area.

Want To Clean Up Your Lake Or Pond Today? Call Splashy McFun

We hope this article helped teach you the important role that lake and pond aeration plays in a healthy aquatic ecosystem.

Whether you own a pond residentially or commercially, you probably want the best deal possible when purchasing a pond aerator or fountain. But where can you find the products at a fair price? Look no further than Splashy McFun.

At Splashy McFun, we care about the quality of the water we swim in. Our first love was water sports, so we know that everything from swimming to kayaking to fishing depends on healthy water quality.

That's why, in addition to a variety of water sports and boating gear, you will also find high quality and highly rated water fountains and aerators available at Splashy McFun. If you have any questions about the many different products we offer, please [reach out by clicking here](#). Thanks for reading and we hope to hear from you soon!