

# *How Do Dock De-Icers Protect Your Dock From Ice Damage?*



## How do Dock De-Icers Protect Your Dock from Costly Ice Damage and Time Consuming Repairs?

Ice is detrimental to the structural integrity of your dock. If you've never experienced ice damage, or you have and suddenly got tired of it - we have the solution.

Through the use of dock protection devices, such as a bubbler and agitator, one can prevent ice-jacking, winter kill and ice expansion. All of which harm your dock in ways unimaginable in the summer.

In this article, we will cover these threats, the importance of de-icers, and how to use them effectively.

So keep reading to learn more.

### **Ice Threats**

As mentioned prior, when it comes to dock protection, there are three things one should be worried about during those colder months. And all of those three things are directly related to ice. So let's take a look at each in detail.

### **Ice Jacking**

Ice jacking, also known as lifting damage occurs when the water and ice levels fluctuate. The common cause for this is [the tide](#), but it's more prevalent in areas where wind and weather changes are regular, thus causing small and rapid changes.

Jacking can also occur on all bodies of water that are regulated by dams. The costs to repair the damage caused by ice jacking does not stop at a physical replacement but goes as far as to dock facility down-time and permit acquirement time expenditure.

Making sure that your dock and the surrounding structures are free from ice is your best bet for protection against jacking/lifting.

Keeping some of the water partially open near the deck will reduce the thickness of the surrounding ice, thus reducing the risk of ice damage to very minimal.

## **Winter Kill**

During those harsh winters, when the ice is thick, and the snow is heavy, the conditions can contribute to the death of livelihood in your pond.

This primarily occurs due to [low oxygen](#) levels, which is a reaction to the lack of sunlight, which kills the aquatic vegetation in your body of water.

As the vegetation has been killed, decomposition takes up more oxygen than there is, thus decreasing the available amount to fish. If even 1% of the total pond surface area is ice-free, then you can successfully prevent winter kill.

## **Ice Expansion**

Ice expansion is underrated as a threat because the size of the body of water is directly pertinent to the potential of the damage risk; the greater the body of water, the greater the potential for ice expansion damage.

This type of damage will affect the dock structures nearest to the shore, and the opposite end as well. It is preferable to keep the dock structure free from ice all-around, but one can limit the expansion risk by keeping a buffer zone with open water.

A flotation de-icer unit can do the job just as well as a dock de-icer and may be preferred in some cases.

## **Dock Protection Solutions**

So if you don't know what the solution to ice threats is, then you're in for a treat. The simplest solution is in the form of a dock bubbler. It works by creating bubbles of air through hose that is connected to an air compressor.

The air bubbles will cause warm water to rise to the surface, which will heat the water around the dock, and thus prevent the water from freezing up. In all honesty, the solution is not perfect, but it can be as long as you consider this:

1. If the lake levels are too low because of drainage or any other reason, the bubbler might malfunction, which can be detrimental to its integrity.
2. Even though a bubbler is great at keeping a dock free from ice, a strong wind can pick up ice from the body of water and damage your dock.

If you do decide to get a bubble, it's best to turn it on in late November, and it should be turned off in late January when the ice has frozen over and stabilized.

You can turn the bubbler back on in March, as the ice starts to shift and melt. However, these are just general guidelines, and depending on where you live, the winter might be shorter or longer, so keep an eye out for the weather.

Another great solution is the dock de-icer, which works as an agitator by circulating the water toward the surface. The device is submerged underwater where it creates a thrust of water toward the surface. This creates a boiling effect which keeps the water moving outward to open up large holes in the ice. A dock de-icer can also be angled closer to horizontal to create a longer but narrower opening.



Some of the most popular models of dock de-icers are the [Power House Ice Eater](#), [Kasco Dock De-Icer](#), and [Scott Aerator Dock De-Icer](#). These de-icers can be connected to a thermostat or timer in order to regulate the usage time and limit the quantity of open water.

Whichever device you choose to protect your dock will need to run for several hours a day. You can experiment with running it less and more to find the optimal amount of time to keep a significant opening and minimize operating costs. In some cases you may need to run it most of the day, while in other conditions you may be able to run it for only a few hours.

## Effective Usage Tips

In order to get the most out of your [dock protection solutions](#), there are some things that one

should keep in mind.

First, it's the law that one gets a permit and posts a sign that mentions open water and thin ice. And that's the most important thing to be aware of; otherwise, you might be putting other people's lives at risk.

Next, when keeping an ice-free zone, try to keep it small as possible to prevent other issues from coming up.

Ensure that your de-icer is forming a narrow opening in the water around the dock, the bubbler is best for this.

If using an agitator, point it upwards rather than at an angle for optimal performance. This will minimize the surface area of dangerously thin ice.

Use a thermostat or timer to run your de-icers only when the air temperature has dropped below freezing. In some cases you can get by with running the devices for just 2 to 4 hours a day.

And if you want to avoid all of these issues in the future, if you need to replace your dock, consider one that can be removed from the water. A cantilever dock eliminates the need for de-icers altogether.

## **When will the water start freezing?**

The answer to this question will vary in different climates and conditions, but we can give you a good rule of thumb that many here at the Lake of the Ozarks (freshwater) use. Whatever the temperature is, it will take that many hours at that same steady temperature for the water to freeze. So if the temperature gets down to 25 degrees, the water will freeze after 25 hours. If your body of water isn't frozen and the temperature suddenly drops to 18 degrees then the water will begin freezing after 18 hours. Winds, depth, and water temperature will cause some variation, but this is an easy and reliable rule of thumb.

## **De-Icers for You**

Now that you know how to ensure winter dock protection, you are well on your way to finding the best possible solution for your needs.

In any case, whatever solution you choose - it will be right for you. However, if you're still having doubts, [get in touch with us](#) and we will guide you in the right direction.

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