

PSA Your Water May Be At Risk

Summer temperatures can cause fish kills—here's how to prevent them in your community



Many people love the long sunny days and warm weather that summer brings, but hot temperatures can put a strain on aquatic environments and push fish to their limits. As temperatures increase, so does the possibility of a fish kill. When a fish kill is discovered, it's common for waterbody owners, managers, and communities to fear the worst—from

chemical spills to foul play. However, most fish kills are a natural occurrence. While an imbalance in nature is usually to blame, actions can be taken to improve the conditions in water bodies during the peak of summer.

What Causes Fish Kills?

Like humans and animals, fish require oxygen in the form of dissolved oxygen (DO) to survive. However, DO can fluctuate by season, weather, or even time of day. The DO requirement in lakes and ponds is highest when water temperatures exceed 80 degrees. When this occurs, the water's ability to hold oxygen is at its lowest. When a lake or pond's water quality becomes unbalanced, just a small change can be enough to stress fish.

Many fish kills occur after several days of cloudy weather, early in the morning, or after heavy rain events. This is because when sunlight is not present, plants also use oxygen (respire), reducing the availability of DO for fish. Additionally, large rain events can rapidly circulate the water in a lake or pond, causing changes in the concentration of oxygen-rich water over a short period of time. This quick 'turnover' of the water can essentially cause fish to suffocate.

How to Reduce the Chances of Fish Kills

Keep a close eye on your waterbody to determine if fish appear stressed or susceptible to a kill. When oxygen levels are low, the fish in the pond will hang out near the water's surface. They may jump in the air or appear very skittish. If you notice these signs and contact your fisheries management professional early on, it may be possible to reduce the severity of the fish kill and prevent future kills by implementing quick and corrective action:

Test water quality

Lake and pond owners often wait until after a fish kill occurs to conduct water quality tests, but proactive water quality assessments can help identify water quality impairments relating to dissolved oxygen, pH, nutrient levels, and many other parameters before they get out of hand. Armed with this valuable knowledge, your lake management professional can ensure the most effective management methods are being utilized to reinforce the ecological balance of your waterbody.

Increase dissolved oxygen

Once DO levels drop to a lethal range, it may take several days to kill the entire fish population. This gives lake and pond owners a chance to strategically circulate the water with floating fountains and increase DO with a bottom diffused aerator or a nanobubble technology (which helps

limit excess algae and provides 79,000x more oxygen than traditional systems). The increased DO can help rapidly restore balance to the aquatic environment.

Manage algae and vegetation growth

When nuisance aquatic plants like duckweed, watermilfoil, and hydrilla are not managed, they may grow in thick patches or form dense mats on the water's surface, blocking sunlight, impeding water circulation, and depriving native species and fish of necessary oxygen. Physically removing this growth through harvesting or hydro-raking can help free up the water column. Likewise, nutrient management tools like biological augmentation and phosphorus-locking technologies like Phoslock and Biochar can help eliminate excessive nutrients in the water body that are known to promote undesirable growth.



Introduce native plants

The quality of the surrounding shoreline has a significant impact on water quality conditions. The addition of a beneficial vegetative buffer comprised of native plants and grasses can help filter stormwater runoff, keeping unwanted sediment and pollutants from entering the waterbody and fueling nuisance growth.

Protect Your Waterbody With a Proactive Plan

Mother Nature sometimes throws curveballs. Excessive heat,

large thunderstorms, and natural disasters may create stressful conditions that can't always be foreseen, and sometimes a fish kill is inevitable. In the event that one occurs on your property, contact your lake management professional to discuss the next steps and ways to prevent future occurrences.

[Click here to learn more about preventing fish kills.](#)