

Fish Kills

WHAT IS MEANT BY "FISH KILLS"

Fish kills are the mass death of the fish population in any given body of water.

WHAT ARE THE SIGNS OF A FISH KILL?

Distressed fish appear at the surface, usually acting in a nervous or extremely excited manner. Sometimes, fish will actually be seen coming to the surface and gulping air in an attempt to acquire the necessary oxygen needed to survive.

DO FISH KILLS OCCUR ANYTIME?

Yes. However, fish kills occur most frequently during the spring dry season when large areas of water suddenly shrink, crowding the populations into a smaller water area. This overcrowded fish population soon uses up the supply of dissolved oxygen in the water and a "normal" fish kill occurs.

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FISH DIE AS A RESULT OF A WIDE VARIETY OF NATURAL AND UNNATURAL CAUSES. They may die of old age, starvation, body injury, predation, stress, suffocation, water pollution, diseases, parasites, toxic algae, severe weather or other reasons.

A FEW DEAD FISH FLOATING ON THE SURFACE OF A POND OR LAKE IS NOT NECESSARILY CAUSE FOR ALARM. However, when large numbers of fish of all sizes are found dead and dying over a long period of time, there is cause for concern. It is important to determine the causes of a fish kill to determine if future kills are preventable and to suggest the best protocol for prevention.

LOW DISSOLVED OXYGEN (D.O.) LEVELS ARE THE MOST COMMON CAUSE OF FISH KILLS.

The amount of oxygen in a body of water will vary with water temperature, degree and type of bottom muck, algae and aquatic plant densities, and amount of sunlight.

AS WATER TEMPERATURES INCREASES, WATER "HOLDS" LESS OXYGEN.

But unfortunately, as water warms and holds less oxygen, fish, bacteria, algae and other aquatic life forms become more active and require more oxygen.

AQUATIC PLANTS ARE GENERALLY CONSIDERED BENEFICIAL TO BODIES OF WATER. They produce oxygen through the process of photosynthesis. As the amount of sunlight decreases, however, plants use more oxygen than they produce. At night, and during periods of low light, vegetation actually competes with fish for oxygen. Decomposing vegetation and mucky bottoms also require oxygen, making less available to fish. In Florida, most D.O. related fish kills occur in the warmer months from May through September.

FISH SWIMMING NEAR THE SURFACE OF THE WATER, AND APPEARING TO BE GULPING FOR AIR, INDICATE A LOW OXYGEN PROBLEM. A quick response can be the difference between losing or saving the fish in your pond or lake. It is important to recognize that repeated kills may necessitate the installation of an inexpensive aeration system that will help maintain consistent D.O. levels and improve overall water quality and fisheries.

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Bluegill

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ARE FISH KILLS OBVIOUS?

As a rule, fish kills are obvious to everyone in the vicinity.

However, if the kill happens in flowing water, the bloated dead fish may only come to the surface after miles of underwater movement. This isn't common, especially in fish kills involving "natural" kills.

WHAT HAPPENS TO THE DEAD FISH?

Portions of the dead fish are eaten by other fish, waterfowl, turtles and other forms of wildlife, while the remainder decays, if man does not remove them.

DO DECAYED FISH HAVE ANY EFFECT?

Yes. The overall effect serves to balance the fertility of the water by returning the necessary minerals that are required for a future balanced fish population.

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Fish Kills CONTINUED

DURING THE SPRING AND FALL RAINY SEASONS, STORMWATER RUNOFF CAN LEAD TO FISH KILLS. Heavy rains can wash large amounts of organic material, nutrients and fertilizers into lakes, accelerating plant growth that can lead to oxygen depletion. Proper watershed management includes diverting or eliminating the sources of excessive nutrients (phosphorus and nitrogen) so they do not threaten fish life in lakes.

CHEMICALS, INCLUDING HERBICIDES AND PESTICIDES, ENTERING A LAKE CAN LEAD DIRECTLY TO FISH KILLS. Ammonia, which comes from animal wastes, is highly toxic to fish. Toxic chemicals usually affect all species and all sizes of fish.



EARLY SPRING CAN BE A DANGEROUS TIME FOR FISH.

As water temperatures rise, populations of disease-causing organisms, such as bacteria and parasites, increase. These organisms can infest fish weakened by spawning activities and the stresses of winter and, if abundant, may kill them. Diseases in lakes seldom kill all the fish and are likely to affect only one or two species.

TURNOVER OCCURS IN THE SPRING AND FALL WHEN SURFACE WATER MIXES WITH WATER NEAR THE BOTTOM.

That water may contain little or no oxygen. Carbon dioxide and hydrogen sulfide gasses that are potentially lethal to fish can build up in the lake's deepest water and are quickly circulated throughout the lake during turnover.

TURNOVER IS USUALLY NOT HARMFUL TO FISH. However, if strong winds, cold rains or rapid temperature changes accelerate the turnover process, fish can die as a result of suddenly being exposed to low quality water.

YOUR LAKE DOES NOT HAVE TO BE A VICTIM OF A FISH KILL.

People can prevent most fish kills by maintaining good water quality. However, once a kill starts, there is little that can be done.



Call Aquatic Systems, Inc. today to have your pond or lake checked for potential problems. We have the experience and technology to improve your water quality and help minimize future fish kills.



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