

SUMMER KILL

Summer kill occasionally occurs in lakes and streams during extremely hot summer weather. High temperature and low dissolved oxygen combine to stress the fish. Most prone to summer kills are pike, perch, suckers, bass, and bluegill living in shallow, productive lakes or bays with excessive amounts of algae or rooted aquatic vegetation. The plants consume large amounts of oxygen at night, causing a temporary shortage of the vital gas just before dawn. A cloudy, calm day extends the critical period by reducing re-oxygenation from photosynthesis and wave action. Apparently, fish in the oxygen-depleted areas do not sense the danger and swim to safety in time.

Summer kill may also occur in deep, unproductive lakes containing trout or cisco. These fish require both cold and well-oxygenated water. During summer they seek refuge in the cold bottom layers where temperatures are less than 72 degrees F. Death results if the oxygen level there declines below about 4 ppm. Trout will also die in streams if they are unable to find cold spring water. Several stream trout mortalities were reported during the hot summer of 1995.

A very unique type of fish kill is caused by a lightning strike on water. Death occurs immediately. Large fish, which draw more electricity than small fish, may be killed selectively.

The risk of some types of fish kills can be reduced by keeping as many nutrients out of the water as possible. Sources of nutrients include septic fields, fertilized lawns and farm fields, and wastes from livestock and waterfowl (including tame geese). Reducing nutrient input starts the following favorable chain reaction: production by aquatic plants is reduced, less decomposition is required, and oxygen will not become depressed to critical levels.

Natural fish kills are obnoxious, and may affect fishing and predator-prey "balance" for years. However, they are often not serious in the long run because lakes contain thousands of fish per acre. They may be thought of as nature's way of thinning out fish populations. Usually, fish kills indicate that the habitat is of marginal quality for certain species because of the broad range of weather conditions we experience in Michigan.

Infrequently, fish kills indicate habitat or pollution problems we may be able to correct. And sometimes, fish kills beneficially reduce over-populated, slow-growing panfish and actually increase growth rates and improve fishing.