



## FISH KILLS and SICK FISH

1. **Fish kills due to low oxygen levels sometimes occur naturally** in the summer and fall when water temperatures are warm and overcast skies or rain occur for a few days. Fish will often be at the surface gasping for air and the larger fish usually die first. The kill is immediate and involves all species in a short time. Emergency aeration with paddle wheels or aerators is the only remedy.
2. **Fish kills due to disease** typically occur over a longer period of time. Fish behavior may be abnormal, and a few fish will die each day over an extended period. One or more species may be affected. Fish diseases can be caused by parasites, bacteria, and viruses. Often, the external signs of some diseases are similar so through examinations and testing are necessary to determine the specific disease.
3. **To determine the cause of fish kills due to diseases, it is necessary to send a properly collected sample of fish (those that are alive but sick, having sores or bloody areas; those that stay near the surface and do not react normally when disturbed; and those swimming in circles or erratically) --- to one of the Aquatic Diagnostic Labs in the state. It is much better to send sick, alive fish than to send dead fish. It is best to ship your fish by Federal Express or United Parcel Service, for next day delivery. You need to call one of the two labs listed below and tell them you have sick fish and desire to ship them to their office. They need to know when your fish will be shipped to them.** If no one receives your call, leave a message for them to call you back. You can also bring the fish to them. Lab personnel will conduct various tests on fish to try to determine the specific disease and suggest treatment methods. You should also send a 6 ounce pond water sample in a clean plastic bottle that has been collected on the same day as the fish. This is a nominal fee for this service. The Mississippi Department of Wildlife, Fisheries, and Parks does not have the laboratory equipment, materials, and technical specialists necessary to diagnose disease problems.

### SHIP FISH TO:

Aquatic Diagnostic Lab  
College of Veterinary Medicine  
240 Wise Center Drive  
Mississippi State, MS 39762

### CONTACT:

Dr. Lora Petrie-Hanson  
Certified Fish Pathologist (AFS-FHS)  
**Aquatic Diagnostic Lab**  
**662-325-1104**

### OR SHIP FISH TO/CONTACT:

Mississippi State University  
College of Veterinary Medicine  
Thad Cochran National Warmwater Aquaculture Center  
127 Experiment Station Road  
Stoneville, MS 38776  
662 686-3302 or 662 686-3304

4. **It is important to follow the collection and packaging instructions on the enclosed sheet. It is best to collect sick fish that are still alive because there is a better chance the cause of the disease can be determined.** Fish should be placed in a Ziplock® bag and surrounded with ice-filled Ziplock® plastic bags or ice packs in a Styrofoam box or a plastic cooler. If a Styrofoam box is used, the Styrofoam box should then be placed in a cardboard box. The fish should not be placed directly on ice or in water. Fish that have been dead for several hours at a warm temperature have decomposed and are poor diagnostic specimens. This makes accurate disease diagnosis very difficult or impossible.
5. **Fish kills due to chemicals** usually involve all species and the kill is immediate. Most pond owners initially believe this is the cause of their fish kill, but this is rarely the cause today. If you suspect that chemicals caused the fish kill, you should immediately contact the Mississippi Department of Agriculture and Commerce, Bureau of Plant Industry at Mississippi State University at (662) 325-3390 or 1-888-257-1285.
6. **The Mississippi Department of Environmental Quality (601-961-5701 or 1-800-222-6362) does not usually investigate fish kills on private waters unless a pollution source is suspected. They do investigate all fish kills in public waters.**