Inland Fisheries Division
Habitat Conservation and Enhancement Program

Spawning Related Fish Kill Fact Sheet

WHAT IS A FISH KILL? An event where large numbers of fish die, sometimes indicating a problem in the body of water but not always. Fish kills can be caused by a variety of factors including dissolved oxygen depletion, extreme water temperatures, spawning stress, fish diseases or introduction of pollutants. Most fish kills are natural events.

Example of Spawning Related Fish Kill in a Connecticut Pond

SPAWNING RELATED FISH KILLS: In Connecticut lakes and ponds fish kills due to spawning related stress are commonly observed during the spring and early summer months, mainly May through June. Typically these fish kills affect bass and sunfish, but other species can be affected as well. As the water temperature begins to warm up, fish move into shoreline areas to spawn. Spawning related activities require a lot of energy and weaken the fish making them susceptible to other environmental factors that non-stressed fish would most likely survive, especially after a long cold winter. Fish can get scrapes and lose scales from the rocky bottoms during nest building which can create an open wound, giving bacteria a point of entry. Secondary infections such as bacteria can easily move in, overtake and eventually kill the fish. Spawning related fishkills gradually occur over a two to four week period with dead fish tending to accumulate along wind prone shorelines.

***AEROMONAS* BACTERIAL INFECTIONS:** Ultimately, spawning related fish kills are the result of the secondary factor, usually a bacterial infection caused by *Aeromonas spp*. Aeromonads are among the most abundant bacteria found in freshwater aquatic habitats. They are so abundant that they can be isolated from the skin and intestinal tracts of healthy non-stressed fish. Aeromonads are considered to be opportunistic pathogens, capable of producing disease only in weakened populations of fish. While signs of bacterial infections can vary, many fish will develop open sores, ulcers with white colored fungus. Other signs of infected fish include slowed movement, swimming near the surface, gasping and protruded fins. Human health is not affected by this bacteria or spawning related fish kills.

Example of an ulcer from a bacterial infection on a sunfish

WILL A FISH COMMUNITY RECOVER FROM A SPAWNING RELATED KILL? Spawning related kills are natural occurrences and are rarely serious in the long run because lakes and streams support thousands of fish per acre. Fortunately, fish have generally already spawned so the new generation will repopulate the lake, pond or stream. Fish kills can sometimes be beneficial for the fish community by reducing weak, older or slow growing fish.

WHAT TO DO IF YOU OBSERVE A FISH KILL: Once dying fish are observed it is usually too late to prevent a fish kill. The public is also reminded that any significant (>50) fish kills that they observe in rivers, lakes, ponds and streams, at any time of the year, should be reported to the DEEP Inland Fisheries Division. Biologists will discuss the caller's observations and determine if a field investigation and involvement of other DEEP units is needed. While most fish kills are natural occurrences, some have been attributed to accidental or unauthorized human actions such as chemical releases, farm runoff and flow modifications or poorly designed or conducted management activities. Anyone reporting fish kills is asked to provide as much detail as possible concerning location, time and date, estimated size, numbers and types of fish involved, and other relevant site-specific information.

INLAND FISHERIES DIVISION

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