Keeping Your Tournament-Caught Bass

ALIVE

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Tennessee Wildlife Resources Agency
Reservoir Fisheries Management Program and
Tennessee B.A.S.S. Federation

Bass tournament anglers have long been dedicated to the conservation of black bass resources. The practice of catch and release has reached outside of their ranks into the practices of bass anglers everywhere, and this has done much to conserve or recycle bass resources on many waterbodies throughout the United States. Released bass have been shown to survive very well when released immediately after capture, but recent data demonstrate that survival may not be as high for fish released after tournament events. This has become a source of concern to many anglers and fishery managers who have witnessed large increases in bass tournament participation. The purpose of this flyer is to urge tournament anglers to become proactive in their bass conservation practices to minimize the potential for fishing mortality.

Over the past decade, several studies have addressed delayed mortality of bass weighed in at fishing tournaments. Although, not all tournaments had high mortality, the high-end of the ranges below were observed during summer events. Other studies have shown that smallmouth bass had significantly higher mortality than largemouth bass after being released.

By using holding pens to observe mortality on fish released after weigh-ins, researchers were able to determine that substantial numbers of fish died after release even when they appeared healthy following weigh-in. Approximately 50% of fish released sank after dying; a phenomenon that has led many tournament participants to underestimate the amount of mortality caused by their events.

Range in Delayed Mortality for Tournaments

- 1 – 50% (AL Summer 1991-92)
- 11 – 52% (AL/GA Summer 1991)
- 1 – 44% (OK Summer 1995-96)
- 0 – 93% (TN Summer 1988-89)
- 38% (Lake Fork, TX in October 1999)

What Causes Mortality?

- Physical Injury
- Oxygen Deprivation
- High Ammonia or Carbon Dioxide
- High Water Temperatures

What Causes Delayed Mortality?

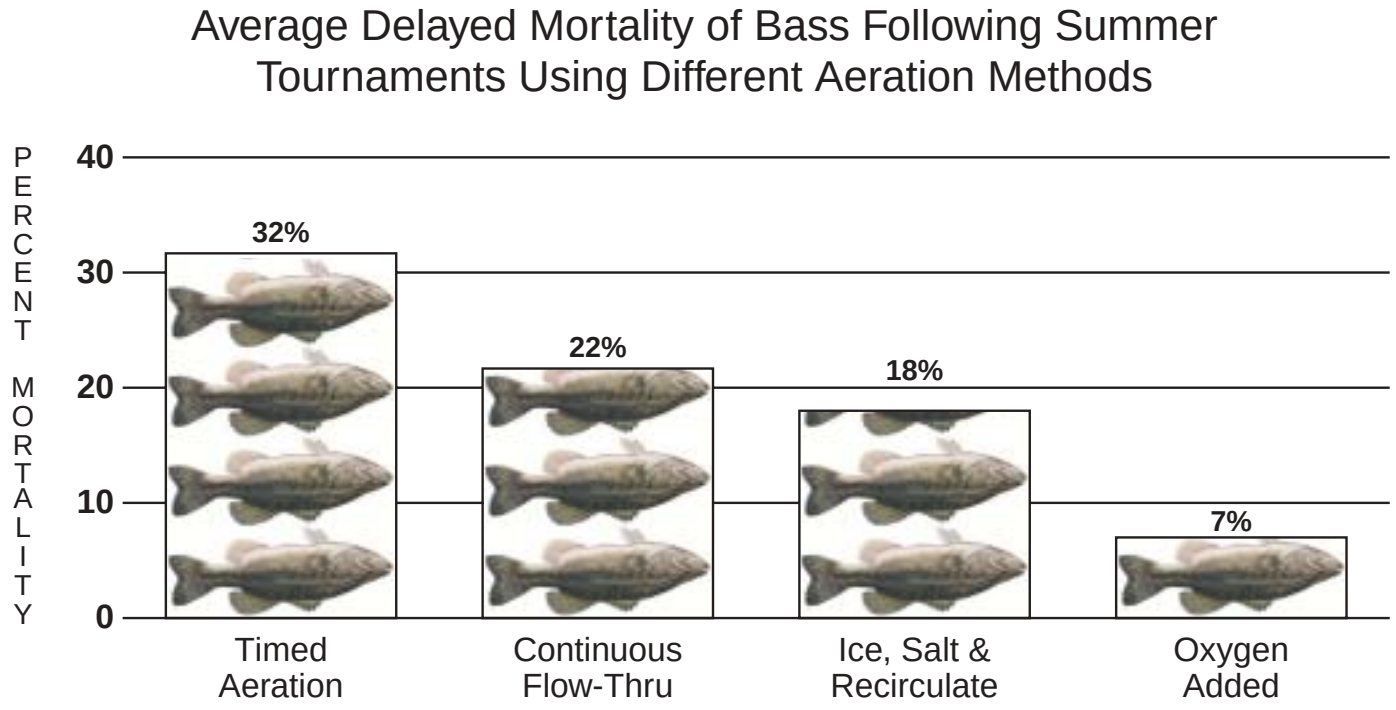
- Oxygen Debt
- Toxins in the Bloodstream
- Infections

The key to minimizing mortality at tournament events is optimizing holding and release practices by event organizers and anglers. Both tournament anglers and organizers can play a major role in keeping the bass they catch alive. Most of those involved in tournament fishing wish to enjoy their sport without harming the resources where they fish. Here are some pointers on how to hold “fish friendly” tournaments.

Tournament Anglers:

- Fill your live well at your first fishing spot using water from open areas of the lake.
- Turn on your recirculating pump immediately and leave it on all day (set pump switch to manual for continuous operation). If the aerator must run on a timer, run as often as possible as oxygen depletion occurs quickly when the pump is off. Make sure aeration system provides proper aeration while boat is moving or on a trailer. If you don't have a recirculating system, add one.
- Only pump in fresh water when lake surface water temperatures are below 75 degrees.
- When water temperatures are above 75 degrees, recirculate livewell water continuously, but do not pump in hot water from the lake. Use ice to cool the water and slow fish metabolism (block ice melts slower) and try to maintain water 10 degrees cooler than lake. Don't overcool the water which can also be stressful to fish. Use only non-chloronated block or bagged ice.
- Use non-iodized salt (available at feed stores) to maintain electrolyte balance and reduce effects of stress. Salt should be added at 1/3 cup per 5 gallons of water. Premeasure and store in ziplock bags. Commercial livewell additives may also be added as directed. Don't oversalt if using both.
- Drain half of the livewell water every three hours to remove toxic waste products (carbon dioxide and ammonia). Add 1/2 the amount of ice, salt, and commercial livewell additive each time.
- Keep fish in rear livewells, evenly distributed between compartments. Fish in forward livewells are more likely to be injured from bouncing on rough water.
- Land fish with knotless nylon or rubber nets. Land fish quickly and avoid damage to slime coating. Grasp fish by lower jaw only, holding them vertically. Support large fish with a wet hand under the belly. Do not allow fish to touch boat or carpet and rub off protective slime.
- Remove hooks quickly with as little tissue damage as possible. Remove deep hooks carefully with pliers or hemostats. When attempts fail, cut line five or six inches above the hook.
- Do not keep fish out of water longer than you can hold your breath.
- Do not use live wells when you are not competing. Practice catch and immediate release or selective harvest by keeping smaller fish (for the kitchen on ice) and immediately releasing large fish.
- Install an oxygen delivery system which delivers oxygen directly into livewells from a pressurized tank through air-stones or hose. The system must have a regulator or pressure valve and the tank must be securely mounted. The system is better than simple aeration (air is only 21% oxygen) and solves oxygen demand problems. Although less need for water temperature adjustments is usually required, flushing with freshwater every 2-3 hours is still essential.

Figure 1. *Researchers in Oklahoma found that adding oxygen to an aeration system greatly improved survival.*



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Tournament Organizers:

- First and foremost, **schedule events for times when water temperature is below 75 degrees.** Night tournaments during the summer do not prevent bass mortality since water temperature change little between day and night. Choose event dates carefully and avoid the months of June through September.
- Consider limiting eligible fish to largemouth bass, which suffer lower post-release mortality.
- Use oxygen tanks and ice at weigh-in stations to keep water well oxygenated and cooled to 10 degrees cooler than lake surface water. One 100 gallon tank per 20 contestants (or teams) should be used.
- Use livewell additive as per directions for volume of water in tanks.
- Weigh your bass in flights if the tournament has more than 50 contestants (or teams). Use no more than 5 bags per twenty contestants (or teams). Keep fish in aerated livewells while waiting for a weigh-in bag.
- Weigh-in bags should be reinforced and perforated to allow for water exchange.
- Again, don't keep fish out of water longer than you can hold your breath. This includes fish in bags headed for weigh-in and fish being displayed. Depletion of oxygen in bags can occur in as little as two minutes.
- Remove dead fish from boat live wells and holding tanks immediately to prevent further mortality. Dead fish may spread fungus and disease to other bass.
- After weigh-in, use a pre-release recovery tank (75 to 100 gallon capacity). Water should be aerated and cooled 10 degrees below lake temperature with block ice. Tank should contain 1 pound of uniodized salt per 25 gallons of water. An oxygen tank with air stone or bubble hose should be set up to supply pure oxygen to the fish.
- Weak fish should be treated longer in the recovery tank. After 20 or 30 minutes weak fish should be sufficiently recovered and then prepared for release. Active fish should be recaptured immediately and prepared for release.
- After the recovery tank, have a salt-dip station set up containing 3 pounds of uniodized salt and 15 gallons of water that is aerated. A laundry sink works best. Bass should be dipped for only 10-15 seconds before being placed in final release tank. The salt dip will kill bacteria and fungus while promoting protective slime production on the fish. Salt dipping will also flush toxins out of the fish when it is returned to fresh water.
- Drain and refill salt dip after 20-30 baskets of fish. Have additional salt and cool water ready. Quickly release fish back to the lake or send them to the release boat.
- Use a release boat if available. Move bass out of high traffic areas and redistribute them around the lake. If a release tube is used, make sure it is at no more than a 30 degree angle and that the delivery end is no more than a foot off of the surface of the water. Release tubes should have continuously flowing water with smooth joints between the PVC tubes.
- When a release boat is not available, try to hold tournaments at different sites to prevent stockpiling of fish around the release site. Studies have shown that many released fish stay in the weigh-in area making them highly vulnerable to harvest after the tournament is over.

Figure 2. *Tournament organizers should consider the following diagram as a guideline for weigh-in procedures to help decrease delayed mortality of bass.*