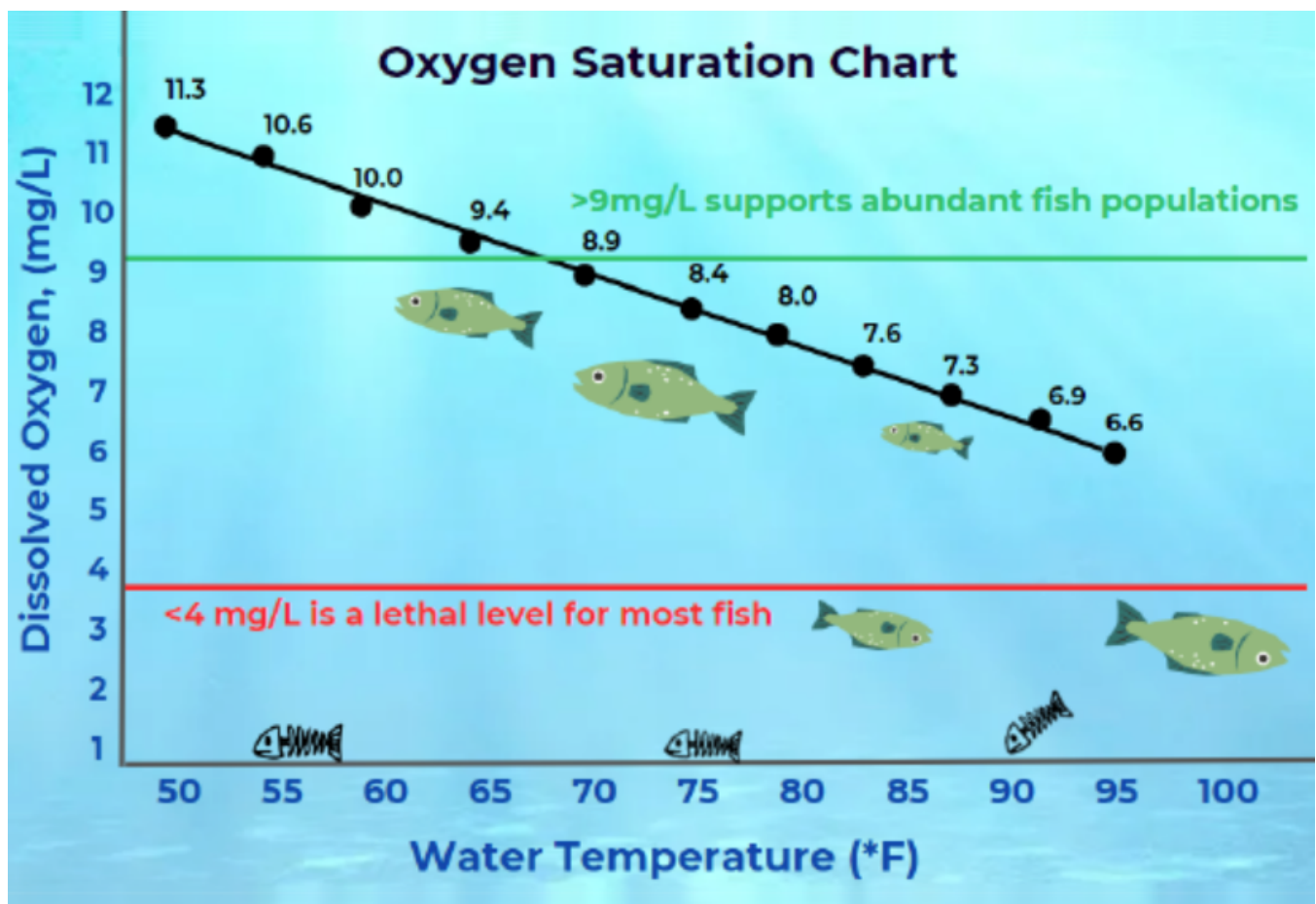


TOURNAMENT DAY FISH CARE & LIVEWELL RECOMMENDATIONS

Aeration is not enough!

Anglers must take an active role in maintaining the health of their catch. Do not assume the boat's livewell system will automatically do all that is necessary to keep fish alive. Black bass mortality during tournament day can be reduced. **Water temperature** is the most significant factor, followed by water quality, barotrauma, and stress.



Key Points:

- Cooler water holds more oxygen.
- Bass metabolism increases with temperature and stress. A fish with high metabolism uses more oxygen.
- A fish's need for oxygen is twice as high at 85° F, than at 50° F. Fish health is dependent on the pounds of fish in your livewell. A 20 lb. bag will use more oxygen than a 5 lb. bag
- Conventional livewell aeration systems **cannot** increase oxygen over 5 mg/L once temperature is >77° F.

Maintaining Livewell Temperature & Oxygen

Below 75° F

- Continuously running flow-through aeration will be sufficient to maintain oxygen levels and remove waste products.

Above 75° F

- Flow-through aeration will not be adequate for surface water temperature over 75° F.
- It is best to recirculate temperature-controlled water.
- Ice cools the water and slows fish metabolism.
- Methods to manually control livewell water:
 - Do not cool livewell water to more than 10° F below lake water surface temperature.
 - One 8 lb. ice block (or two frozen half-gallon jugs) will cool a 30-gallon livewell 10° F for about 3 hours.
 - Add more or less ice depending on your livewell capacity. Block ice melts slower than cubed and will maintain temperature longer.
 - At 3 hours, refill livewell with fresh water to remove waste products, then repeat cooling with additional ice blocks or frozen water bottles/jugs.
 - Aftermarket devices for livewell-water cooling can be installed.

Surface Water Temperature	Livewell Water Temperature
<75° F	Maintain water temperature and water quality by continuously running flow-through pumps.
75-85° F	Using methods outlined above, cool water 10° F.
Over 85° F	Consider canceling tournament or alternate weigh-in methods.

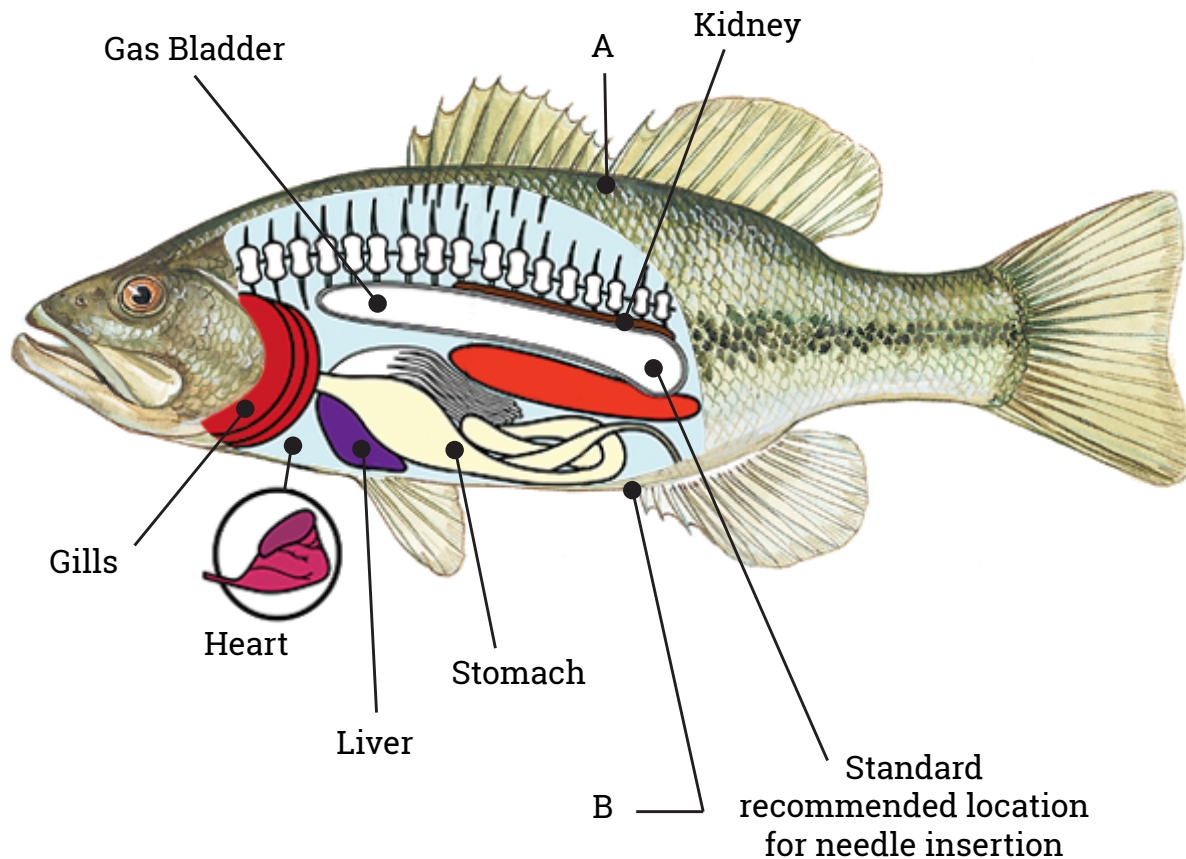
Water Quality & Metabolic Waste

- At 80° F and a pH of 8, 10 lbs. of bass in a 15-gallon livewell can excrete enough ammonia to be stressful in 4 hours and lethal by the end of the tournament day.
- If guidelines for temperature control are followed, waste accumulation should not be a problem.
- Avoid adding water from stagnant or shallow areas that may be warm and low in oxygen.
- Avoid recirculating livewell water with lake water in lakes known to contain golden algae or when known golden algae blooms are ongoing.

Swim Bladder Relief for Barotrauma

- Fish caught at depths of 30 feet or more and brought to the surface quickly, may suffer from over expansion of the swim bladder. Symptoms of barotrauma include: inability to submerge and maintain upright position with head, tail, and side breaking the water surface.

- Side fizzing – A method used to relieve air bladder pressure. Fizzing is most effective when done immediately following observed symptoms. See figure below.
- The location for needle insertion varies with fish size, but in general, draw an imaginary line between the notch in the dorsal fins (A) and the anus (B). Draw another line from the tip of the pectoral fin to the fork in the tail.
- **CAUTION:** Side fizzing can cause delayed fish death due to infection or vital organ injury, when not done correctly.



Stress Reduction

- Fish under stress take in more water than normal, diluting their blood.
- By keeping salinity of the livewell water near what their blood should be, stress and delayed mortality can be reduced.
- To achieve this, use noniodized salt at a rate of 1/3 cup per 5 gallons of water.
- It may be convenient to pre-measure salt into containers and have them ready for use during the tournament day.
- State fish and wildlife agencies cannot recommend the use of commercial water additives as they may contain chemicals not approved by the U.S. Food and Drug Administration for use on fish that may be eaten by humans at a later date.

Fish Release

- Release fish near where they were captured either by the anglers or using a release boat. This is important in lakes with multiple tournaments, lakes that contain golden algae, and in warmer water temperatures. Studies have shown fish do not immediately disperse from the release location. Fish stockpiled up at one location are more susceptible to predation, angling, and water quality issues.

Buy a fishing license and access the Arizona Fishing Regulations: www.azgfd.gov/fishing

Learn more about tournament fishing in Arizona: www.azgfd.gov/tournaments

Much of the information in this document was obtained from the BASS Conservation Organization and "Keeping Bass Alive: A Guidebook for Anglers and Tournament Organizers."



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