

## **Excerpt from the Northeast Black Bass Technical Committee Report, July 12, 2006**

***Charge 2 - Examine the current status, distribution, and occurrence of largemouth bass virus in the Northeast, synthesize available information, evaluate the risk of spread, coordinate fish health testing and planning, and provide recommendations on measures to address identified issues.***

- A comprehensive review of the published LMBV literature was synthesized, covering; history, distribution, disease effects, transmission, testing, population effects, and research findings.
- LMBV was first detected in 1991 in Florida.
- The virus is only known to be lethal to largemouth bass.
- Documented fish kills attributed to the disease caused by the virus have occurred throughout the southeast and as far north as Michigan.
- LMBV has appeared to spread westward and northward from its origin in the South.
- The virus has been detected in seven of ten Northeast States where testing has occurred. Three States and the District of Columbia have not tested for LMBV.
- Large-scale fish kills of smallmouth bass in the Susquehanna and Potomac River watersheds have included the detection of LMBV. The role of LMBV in the fish kills is unclear.
- Recent research in Alabama has shown that largemouth bass populations not known to have experienced a fish kill, but where the virus was known to exist, experienced significant declines in the abundance of largemouth bass and a significant increase in the time required to catch a large bass.
- The same research noted sub-lethal effects on largemouth bass that include reduced condition factors and growth rates.
- Additional research has demonstrated that tournament caught fish in infected waters, and held for observation, experienced greatly elevated delayed mortality on the order of >75%.
- The virus may be transmitted through the water, by consuming infected prey, and direct or indirect contact in livewell tanks
- The virus remains detectable in water for up to 7 days.
- The prevalence of the virus among uninfected fish mixed with positive fish was shown to increase significantly and rapidly following containment in livewells.
- Other species that are known to carry the virus include smallmouth bass, chain pickerel, bluegill, redbreast sunfish, and black crappie. The ability of other species to carry the virus, such as baitfish, is not known.
- All Northeast States should develop testing plans for LMBV.
- Sampling to detect the virus requires sacrificing fish.
- Sampling should be conducted in the summer and early fall when the virus/disease is known to be most active.
- The USFWS Lamar Fish Health Unit can conduct tests on shipped samples or assist in field collection, at no charge to State agencies.
- The preferred minimum sample size is 60 fish, but as few as 20 may be processed for a population.
- The long-term implications of LMBV in the Northeast are unclear for largemouth and smallmouth bass populations.
- There are many unknowns regarding the behavior of this virus in northern black bass populations and how it will behave relative to southeastern US experiences.
- The consumption of LMBV infected fish is not known to be harmful to humans. However, any visibly diseased fishes are not recommended for human consumption.

Based upon a review of the published literature, technical reports, input from States and Federal fish health biologists, university researchers, and Committee discussions, Guidelines were developed by the Committee on the topic of LMBV in the Northeast. These Guidelines were developed to assist

State and Federal agencies in outlining appropriate steps for dealing with LMBV to restrict spread, reduce effects in tournaments, provide guidance on testing, and describe additional research needs.

**Recommended Guidelines:**

**1) *Restrict Spread***

- a) Do not transfer fish carrying LMBV, even to other water bodies where the fish are known to have LMBV.
- b) If a transfer is determined necessary, then all importations of fish into, or liberations and transfers within a State, whether from facility to facility, facility to a water body, or between water bodies; the source fish culture facility or water body should possess a fish health inspection report issued by a fish health biologist indicating that three annual inspections of the fish lot(s) on the facility or water body have been free of LMBV.
- c) Boats, trailers, and all equipment in contact with water should be thoroughly cleaned between water bodies. A disinfecting bleach solution of one ounce of standard household liquid bleach per gallon of water should be sprayed inside the live well and other appropriate surfaces. The solution should be allowed to stand for 15 minutes before thoroughly rinsing the areas off. Both of the aforementioned protocols should be performed at home prior to the equipment (boat, trailer, tanks) entering any other water body. CAUTION: Chlorine is extremely toxic to aquatic life, hence thorough rinsing is mandatory.
- d) State and Federal agency boats, trailers, sampling gear, tanks or any equipment that comes in contact with water should be thoroughly cleaned between water bodies. These precautions should also be practiced by agency subcontractors such as Universities and other research entities. The previously mentioned disinfection procedure or other equally effective measures should be developed as standard operating procedures.
- e) Develop appropriate literature or other media to educate the angling and boating public on LMBV. Outreach or education may be more specifically targeted or highlighted in waters known to have the virus present.

**2) *Measures to Reduce LMBV Stress in Tournament Caught Fish***

- a) Encourage all anglers to institute measures to reduce stress during livewell containment in warm water or weather conditions, or other stressful periods.
- b) Consider tournament management measures that would reduce holding times, bag limits, or promote paper tournaments during stressful periods. The use of temperature or stress-related triggers should be considered for the enactment of these measures.