

Preventing the spread of VHS

It is illegal to move sport fish from one waterbody to another. Recreational fishing, tournaments, competitions, fishing derbies or other contests where individuals catch, compare and release live fish have the potential to spread the disease.

Do not release unused dead or live baitfish into a waterbody. The use and movement of live bait also has the potential to spread the virus. Bait purchased commercially should not be released into any body of water. Limit the use of wild caught bait to the waterbody where it was collected. Do not dispose of fish parts by throwing them into the water and never into a different water body than where it originated.

Disinfect live-wells and equipment after use: Drain water from bilge and live wells and clean live wells, boats, trailer and other equipment between fishing trips with hot soapy water or a bleach and water solution and let air-dry.

For the bleach solution, place 1/8 cup (2.5 tablespoons) of bleach into a clean gallon milk jug and fill to top with water; use a spray bottle to administer the solution to your live well. You may rinse the live-well with fresh water after bleaching if there is not time to open it.

Sources: NH Fish & Game Dept., NH Wildlife Journal, Wisconsin Dept. of Natural Resources, Vermont Fish & Wildlife Dept., NY Dept. of Environmental Conservation

When leaving a waterbody:

- ◇ Inspect your boat, trailer & equipment and remove visible aquatic plants, animals and mud.
- ◇ Drain water from your boat, motor, bilge, live wells, and bait containers. Do not drain this water into a waterbody.
- ◇ Do not move live fish from one waterbody to another.
- ◇ Dispose of leftover bait in the trash, not in the water or on land.
- ◇ Catch your own bait and use it to fish in the water where you caught it.
- ◇ Wash your boat and equipment with high pressure or hot water, or let it dry for five days.



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VHS Viral Hemorrhagic Septicemia:

A Major Threat to Freshwater Fish Populations



photo courtesy cfsph.iastate.edu

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Viral Hemorrhagic Septicemia (VHS) is a serious pathogen of fresh and saltwater fish that is an emerging disease in the Great Lakes region of the United States and Canada. VHS was first diagnosed as the cause of large fish kills in US freshwaters in 2005. It's not a threat to people who handle infected fish or want to eat their catch, but it is a threat to more than 25 fish species. It is the most significant fish disease in the US in the last 50 years.

The VHS virus is considered an invasive species, but scientists are not sure how the virus arrived. It may have entered with migrating fish from the Atlantic Coast, or may have hitch-hiked in ballast water from ships. VHS first appeared on the U.S. West Coast in 1988 in marine trout and salmon, and started to be noticed in marine fish off the eastern Canadian province of New Brunswick from 2000-2004. Several midwestern states, New York, Pennsylvania and the Canadian provinces of Quebec and Ontario have reported VHS. Several states have already set up regulations to prevent the spread of the virus. To date there have been no VHS virus-infected fish collected in New Hampshire, but there is a real threat that the virus will eventually reach New Hampshire waters.

If you suspect VHS virus or see a fish kill, immediately report it to the NH Fish and Game at (603) 744-5470

Signs a Fish Might Have VHS

The following symptoms could apply to many different fish diseases, therefore, VHS must be confirmed by lab tests. Additionally, some infected fish may not show any signs and transporting these fish to new locations could spread the disease to new waters.

- ◆ Bulging eyes
- ◆ Pale gills
- ◆ Darkening overall color
- ◆ Bloating or distended (fluid-filled) abdomen
- ◆ Bleeding around the eyes, bases of the fins, sides and head
- ◆ Unusual behavior, such as corkscrew swimming pattern

How VHS Spreads and Environmental Factors

Infected fish shed the virus in their urine and reproductive fluids. The virus can survive in water for at least 14 days. Virus particles in the water infect gill tissue first, and then move to the internal organs and the blood vessels. The blood vessels become weak, causing hemorrhages in the internal organs, muscle and skin. Fish can also be infected when they eat other infected fish. Fish that survive the infection will develop antibodies to the virus. Antibodies will protect the fish against new VHS virus infections for some time. However, the concentration of antibodies in the fish will drop over time and the fish may start shedding the virus again. This can create a cycle of fish kills.



photo courtesy sleloinvasives.org