



RICK SNYDER
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF AGRICULTURE
AND RURAL DEVELOPMENT

JAMIE CLOVER ADAMS
DIRECTOR

May 11th 2017

Aquaculture Facility Owner:

As an aquaculture facility currently registered with the Michigan Department of Agriculture and Rural Development (MDARD), we would like to make you aware of a developing disease issue. Recently, in the Lake St. Clair and Erie area, there has been a large outbreak of viral hemorrhagic septicemia (VHS) that is infecting many species of wild populations of fish. VHS has also been discovered at retail bait shops on the Eastern side of the state in minnows.

At the end of March, increased wild fish mortalities on the U.S. and Canadian side of Lake St Clair were observed. At that time, fish samples were collected and submitted for viral testing and the results recently came back positive for VHS virus. Since that time, the outbreak has continued to expand and the virus is now infecting a wide range of baitfish and sporting fish species. Currently this includes the area beginning at Marysville on the St. Clair River and continues south into Lake Erie as far east as Sandusky, Ohio.

MDARD is recommending that if you intend to stock your facility with wild caught baitfish, be aware of where the baitfish were harvested from and understand that there are increased risks associated with fish harvested from public waters currently affected by the VHS virus.

Additionally, it is recommended that you request to see the health certificates and disease testing results prior to purchase of any baitfish. Keep in mind that certifications and test results from the 2016 fall harvest may not accurately reflect the current status of fish, if a spring harvest was collected.

As a reminder, it is essential that aquaculture facilities implement good biosecurity practices to help reduce the risk of disease. Aquaculture facilities should:

- Have a designated quarantine/isolation area for any wild-caught baitfish. Your isolation area should be downstream or on a separate flow from other lots of fish.
- Designate separate equipment for each lot of fish on your farm, regularly clean and disinfect your equipment, and avoid using equipment from other facilities.
- Use appropriate disinfectants that are effective against the VHS virus on equipment, raceways and ponds.
 - Common disinfectants such as iodophores, sodium hydroxide, bleach and formalin are effective against the VHS virus, as is ultraviolet irradiation. Lime disinfection is less reliable.

- Disinfect incoming vehicles, equipment and shoes.
- Discourage the presence of unwanted animals (e.g., invertebrates, rodents, birds, amphibians, reptiles) through the use of enclosures and screens.

Lastly, it is important to be aware of and monitor the clinical health of all fish in your facility. VHS-diseased fish may display non-specific clinical signs in the early stages of infection, then progress to lethargy, abnormal swimming behavior with a distended abdomen, and red spots or streaks on the skin especially near the base of fins, leading to death in a large percentage of affected fish. If you suspect you have sick fish, contact me immediately at 517-284-5685 or 517-373-0440 for after-hours emergencies.

It is likely that this outbreak will continue to expand until water temperatures warm-up to approximately 65°F or higher. It is important to take these precautions to protect your aquaculture facility until further notice. Information will continue to be collected and we expect details and circumstances of the outbreak to change over time. As we receive information, we will continue to keep you up-to-date. If you have updates to your contact information or email address please call Tina Moreno at 517-284-5683.

Sincerely,



Stephen Hussey, DVM
Aquaculture Program Manager
Animal Industry Division

Species allowed for aquaculture in Michigan that may be susceptible to VHS:

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| • Atlantic Salmon | • Green Sunfish | • Redear Sunfish |
| • Black Bullhead | • Hybrid Sunfish/Bluegill | • Rock Bass |
| • Black Crappie | • Lake Herring | • Sand shiner |
| • Bluegill | • Lake Trout | • Smallmouth Bass |
| • Bluntnose Minnow | • Lake Whitefish | • Spotfin Shiner |
| • Brook Trout | • Largemouth Bass | • Spottail Shiner |
| • Channel Catfish | • Muskellunge | • Walleye |
| • Common Shiner | • Northern Pike | • Warmouth |
| • Creek Chub | • Northern Redbelly Dace | • White Bass |
| • Emerald Shiner | • Pacific herring | • White Crappie |
| • Fathead Minnow | • Pumpkinseed | • Yellow Bullhead |
| • Flathead Catfish | • Rainbow Smelt | • Yellow Perch |
| • Golden Shiner | • Rainbow Trout | |