

Fact Sheet

Feuille de renseignements



Ministry of Natural Resources (MNR) Ministère des Richesses naturelles (MRN)

February 2012

FISH FARMERS CAN HELP SLOW THE SPREAD OF FISH DISEASE Viral Hemorrhagic Septicemia (VHS)

What is VHS?

- VHS is an infectious disease of fish that was first detected in Lake Ontario in 2005.
- There are several strains of VHS that affect fresh and saltwater fish species.
- VHS disease outbreaks may happen at any time, but are most likely during the spring as temperatures fluctuate and fish are reproducing.
- The Great Lakes strain of the virus affects or is carried by many species of fish including:

Game fish

Walleye
Yellow Perch
Muskellunge
Smallmouth Bass
Rock Bass
Chinook Salmon
Black Crappie
White Bass

Baitfish

Emerald Shiners
Bluntnose Minnows
Spottail Shiners

Other species

Freshwater Drum
Round Goby
Gizzard Shad



What could a fish with VHS look like?

A fish can look healthy, showing no signs at all.



Photo: John Lumsden

Or a fish can look sick, showing signs of disease.

Can VHS infect people?

- No, the virus does not affect humans.
- Fish carrying the VHS virus are safe to eat and to handle. As a precaution, do not harvest fish that appear sick, dying or dead.

Where has VHS been found?

- Until 2011, the waters of Lakes Ontario, Erie, and Huron and their connecting waterways and adjacent tributaries up to the first impassable barrier for all fish species were considered positive for VHS. In 2011, VHS was detected in Lake Simcoe.

What signs can a fish show?

- Pale gills and organs
- Bloated abdomen
- Bulging eyes
- Hemorrhages (bleeding) on body and organs
- Darker body colour

It is important to remember that some fish do not show any signs of infection. To help slow the spread of VHS, follow the actions in this fact sheet.

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How does VHS spread?

- VHS can spread through the water, on infected fish, or with their body fluids.
- VHS may be spread from one waterbody to the next by any method that involves the movement of fish, water, vessels or equipment that has had contact with the virus.



Photo: Ontario Ministry of Agriculture, Food and Rural Affairs

How can you help?

- **Eggs collected from wild stock should be disinfected** during the water-hardening stage of fertilization with an iodine-based solution. Best Management Practices are available at MNR District offices or at ontario.ca/mnr.
- **Import disease-free eggs and/or fish.** Request a health certificate stating that fish have been tested and are free of VHS prior to movement.
- **It is illegal to stock fish infected with VHS virus and other disease organisms.**
- **Isolate any fish that appear to be sick** to minimize the spread of disease.

- **Develop and implement a biosecurity program** including strict sanitary procedures for visitors, suppliers, staff, equipment and vehicles.
- **Disinfect equipment regularly**
 - Use a 10% household bleach/water solution (i.e., 100 ml of household bleach to 900 ml of water).
 - Rinse well to remove residual bleach and discard away from any waterbody.
 - Virkon® S is also a widely available disinfectant. Follow the instructions on the product label.
 - Install disinfection stations at farm entry and exit locations.
- **Prevent predators and scavengers** from gaining access to fish and fish feed.
- **Collect fish mortalities** in secure containers with tight-fitting lids. Dispose of mortalities in a landfill or compost facility.
- **Optimize fish health** with good nutrition, water quality, minimal handling, and optimal stocking densities.
- **Control facility effluent** to minimize impact on natural waterbodies.
- **Develop and implement a fish health management plan** including routine screening.
- **Contact your veterinarian** if you suspect VHS or any illness.

VHS in your facility may cause increases of disease outbreaks and/or mortalities. The actions in this fact sheet will help slow the spread of fish diseases.

For general enquiries and to report fish die-offs, call:
Ministry of Natural Resources
Natural Resources Information Centre
1-800-667-1940

To view the rest of this VHS Fact Sheet series and for information about the Ministry of Natural Resources' VHS management actions, visit:
<http://www.mnr.gov.on.ca/en/Business/LetsFish/2ColumnSubPage/241211.html>

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ontario.ca/mnr