

# Stop The Invasion



Photographs courtesy of Jim Winton, U.S. Geological Survey, and Mohamed Faisal, Michigan State University

## Viral Hemorrhagic Septicemia Virus

Report Sightings  
@

[invasivespecies.wa.gov](http://invasivespecies.wa.gov)

June 2016



### What is it?

Viral Hemorrhagic Septicemia (VHS) is a deadly fish virus and aquatic invasive species that attacks and weakens the blood vessels of fish. Broken blood vessels and severe blood loss ultimately causes death. It afflicts more than 50 species of freshwater and marine fish in several parts of the northern hemisphere. Scientists are not sure how the virus arrived. It may have come in with migrating fish, or may have hitchhiked in ballast water from ships. VHS was first found in European freshwater trout in the late 1930s and continues to cause epidemics in European trout farms. It appeared on the U.S. West Coast in 1988 in marine trout and salmon.

### Is it here yet?

Yes. There have been sporadic outbreaks in isolated freshwater areas, usually from hatchery fish. Presently the VHS Virus IVb is found only in freshwater, but it may be viable in saltwater. The VHS Virus IVa is in marine waters from Alaska to southern California.

### Why should I care?

The virus is highly contagious and has the potential to infect as many as 42 species of fish, including salmon species and all major sport fish in the state.

### What should I do if I find one?

Report online at [www.invasivespecies.wa.gov](http://www.invasivespecies.wa.gov)

### How can we stop it?

The Washington Department of Fish and Wildlife has instituted rigorous controls to keep the virus out of the state and private hatcheries. Additionally, the agency's recreational watercraft management plan monitors for the virus as part of the efforts against zebra and quagga mussels. Agencies in the United States and Canada have placed restrictions on the movement of fish or fish products that could represent a risk for spreading the virus to regions outside of the currently known geographic range.



*Photograph courtesy of J. Fryer*

## What are its characteristics?

- Infected fish exhibit areas of hemorrhaging on the skin.
- Internal examination reveals swollen and broken blood vessels and congestion of the internal organs.
- Hemorrhages are evident in the eyes, skin, and gills, and at the bases of the fins.
- Fish can appear lethargic and dark in color.
- The abdomen is markedly distended due to edema of the liver, kidneys, and spleen.

## Where do I get more information?

- U.S. Geological Survey: [www.lsc.usgs.gov/fhb/leaflets/83.asp](http://www.lsc.usgs.gov/fhb/leaflets/83.asp)
- National Oceanic and Atmospheric Administration: [www.glerl.noaa.gov/res/Programs/ncrais/docs/factsheets/novirhabdovirus.html](http://www.glerl.noaa.gov/res/Programs/ncrais/docs/factsheets/novirhabdovirus.html)
- U.S. Department of Agriculture's National Agricultural Library: [www.invasivespeciesinfo.gov/microbes/vhs.shtml](http://www.invasivespeciesinfo.gov/microbes/vhs.shtml)

**Report  
Sightings**  
@

*invasivespecies.wa.gov*