



Photo: U.S. Geological Survey



# Viral Hemorrhagic Septicemia Virus



Infected young fish have bulging eyes and bloody spots. Photo: U.S. Geological Survey



Infected fish can have hemorrhages all over their bodies. Photo: Jim Winton, U.S. Geological Survey.

## What Is It?

Viral Hemorrhagic Septicemia Virus (VHSV) is an invasive wildlife disease and a deadly fish virus that attacks and weakens fish blood vessels. Broken blood vessels and severe blood loss ultimately cause death. It affects more than fifty species of freshwater and marine fish in several parts of the northern hemisphere. Scientists are not certain how the virus arrived. Migrating fish may have introduced it or it may have hitchhiked in the water used to stabilize ships. The virus was first found in European freshwater trout in the late 1930s. It continues to cause epidemics in European trout farms. The virus appeared on the West Coast in 1988, infecting native marine trout and salmon.

## Is It Here Yet?

Yes. There have been occasional outbreaks in isolated freshwater areas, usually affecting hatchery fish. There are many different subtypes. The IVa subtype is found in marine waters from Alaska to southern California. The IVb subtype is found only in freshwater, but it may survive in saltwater.

## Why Should I Care?

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

## What Are Its Characteristics?

- Infected fish show bloody areas (hemorrhaging) on the skin.
- Internal examination reveals swollen and broken blood vessels.



- Hemorrhaging can also appear in the eyes, gills, and fin bases.
- Fish may appear lethargic and dark in color.

## How Can We Stop It?

The Washington Department of Fish and Wildlife has strict measures in place to prevent the virus from reaching state and private hatcheries. Additionally, the agency's recreational watercraft management plan includes monitoring for the virus as part of ongoing invasive mussel efforts. Agencies in the United States and Canada have placed restrictions on the movement of fish or fish products that could spread the virus to regions outside of the currently known geographic range.



A fish with viral hemorrhagic septicemia virus. Photo: Wikipedia

## What Should I Do If I Find It?

Report immediately via the WA Invasives mobile app or reporting web form at <https://invasivespecies.wa.gov/report-a-sighting/>.