

Viral Hemorrhagic Septicemia Virus



A New Aquatic Invasive Species

Contact: Michael Staggs, Wisconsin DNR Bureau of Fisheries Management

“The appearance of VHSV in the Great Lakes is a huge big deal” – report from fish health specialist Sue Marcquenski to WDNR administration, May 17, 2006



Michigan.gov Home | DNR Home | Links | Site Map | Contact DNR | Ask DNR

Michigan.gov
The Official State of Michigan Website

Search

Departments/Agencies
Online Services
Statewide
DNR Events

Fishing

- Fish Leaders and Hires
- Fish Disease
- VHS
- State Fish Hatcheries
- Master Angler & State Records
- Research
- DNR and DNR Field
- Fish Identification
- Tidal Coordination Unit
- Inshore Action Plan

Hunting

Recreation & Camping

Law Enforcement

Forest, Land & Water

Inside DNR

Wildlife & Habitat

Salts & Leases

Education & Outreach

Publications & Maps

Commissions, Boards & Committees

Hunting and Fishing Licenses

Land Consolidation

RAM
Ralph A. MacMillan

Department of Natural Resources Confirms Spread of Viral Hemorrhagic Septicemia (VHS) in Great Lakes

Contact: Kelley Smith 517-373-3375
Agency: Natural Resources

January 25, 2007

Recent analyses of fish sampled from northern Lake Huron have confirmed the existence of viral hemorrhagic septicemia (VHS) in lake whitefish, walleyes and Chinook salmon, Department of Natural Resources fisheries officials announced today. VHS is a virus that causes disease in fish but does not pose any threat to public health.

The analyses that were completed earlier this week establish that VHS has now been confirmed in lake whitefish samples from the Cheboygan area, in lake whitefish and walleye samples from the Thunder Bay area, and in Chinook salmon samples from the Swan River egg-take station near Rogers City.

"The continuing march of VHS through the waters of the Great Lakes is a major challenge to our agency and our management options," said DNR Director Rebecca A. Humphries. "These new discoveries are extremely unfortunate and further highlight the problems created by the constant introductions of new diseases from outside of the Great Lakes region, the speed with which they can spread, and the threat that such pathogens pose to our natural resources."

VHS was detected in lake whitefish in the Cheboygan area after re-analyzing samples collected in 2005 during a survey for bacterial kidney disease (BKD).

"It is not unusual for us to collect fish that have unknown viruses, which typically require a significant effort to properly identify," said Gary

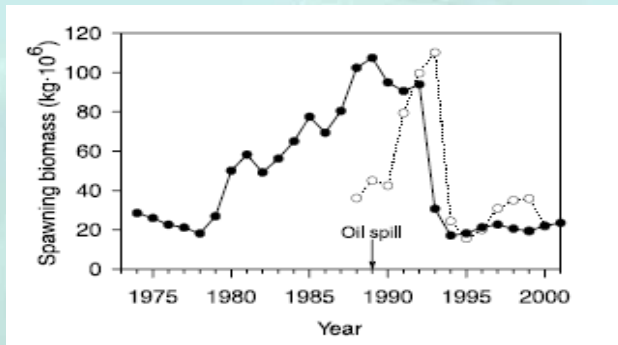
Not a human health issue, but...



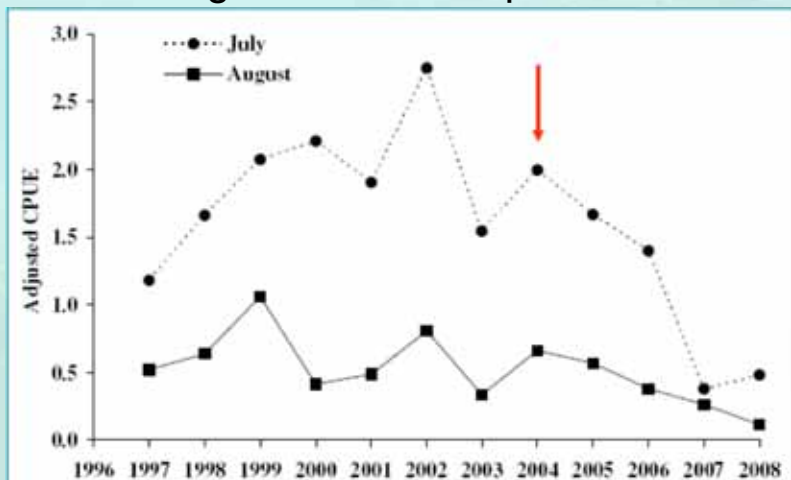
Prince William Sound Pacific Herring

Population reduced by 80% after a VHS outbreak in 1993
(Marty et al. 2003)

Population has not recovered and remains closed to fishing.



St. Lawrence River Muskellunge Young of Year catch per effort



<http://www.savetheriver.org/docs/uploads/Farrell%20muskies.pdf>

FISHERIES MANAGEMENT.....



Much to lose!

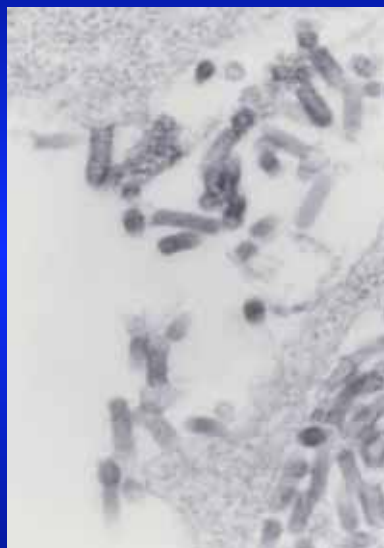


- **1.4 million licensed anglers**
- **21 million days of fishing each year**
- **\$2.75 billion dollar industry**
- **30,164 jobs**



Source: USFWS 2006 Survey of Hunting, Fishing and Wildlife-related Recreation

A fish virus with no treatment...



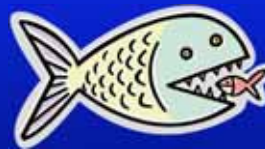
Objective: Contain the VHS Virus

How does VHS spread?

- Sick fish shed the virus into the water
- Healthy fish pick up the virus in their gills



- Healthy fish eats a sick fish



Millions of People Involved!



1.4 million licensed anglers

625,000 registered boats

2,200 fish farms

800 bait dealers

90 wild bait harvesters



An Integrated Control Program is Necessary!

- ***Regulations***
- ***Biosecurity in fish farms and hatcheries***
- ***Quality control in bait fish industry***
- ***Research***
- ***Public education and outreach***
- ***Surveillance and monitoring***

Where is VHS virus now?

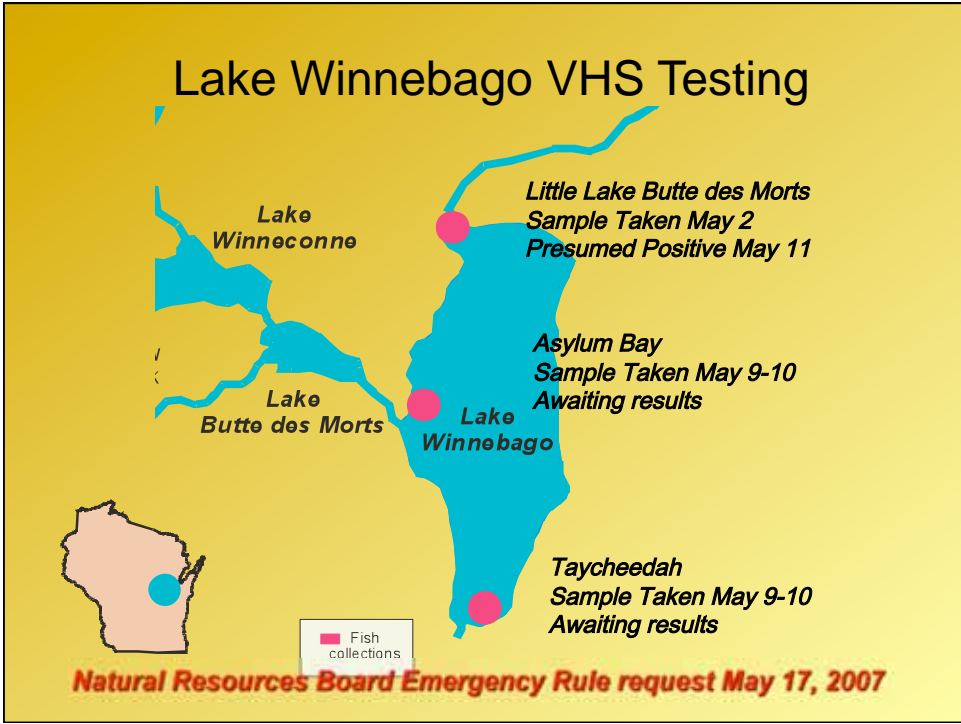
- Probably in Lake Michigan
- May be in Lake Superior and Mississippi River drainage
- Probably not yet in inland waters

Natural Resources Board Emergency Rule request April 4, 2007

Emergency Rule to Slow the Spread of VHS virus

- ✓ **Prohibits the transportation of live fish and eggs from the Great Lakes and Mississippi River unless they comply with USDA APHIS rules related to VHS, test negative for the virus or have written approval from the Department.**
- ✓ **Requires water to be drained from bilges, ballast, buckets, live wells immediately after leaving the waters of the Great Lakes and Mississippi River.**

Natural Resources Board Emergency Rule request April 4, 2007



⚠️ VHS ALERT ⚠️ ATTENTION ANGLERS



REMEMBER

You must drain all water from your boat and equipment when leaving any state water except:

- ☛ You can take up to 2 gallons of water needed to hold live minnows that can be legally transported as outlined below.

You may not leave a water with any live fish, or fish eggs except:

- ☛ You can take live minnows bought from a Wisconsin bait dealer and left over after a fishing trip away from any state water and use them:
 - 1 again on that same water, or
 - 2 on other waters but only if no lake or river water, or other fish were added to their container.

For more information on the VHS virus, visit: fishingsconsin.org

⚠️ VHS ALERT ⚠️ ATTENTION ANGLERS



- **Minnows may not be harvested for personal bait use from this water**
- **Suckers may be harvested but cannot be taken away alive**

For more information on the VHS virus, visit: fishingsconsin.org

VHS Current Rules

(■ affected waters)



- Lake Superior
- Lake Michigan
- Lake Winnebago system
- Mississippi River
- and all their tributaries upstream to the first dam or barrier impassable to fish

FISHERIES MANAGEMENT..... we make fishing better

Hatchery Quarantines and DNR Operations Review



DNR Operational Changes

- *Increased VHS testing*
- *Disinfection protocols*
- *Separate production from VHS+ waters*
- *No fry stocking*
- *No coolwater fish production from VHS+ waters*





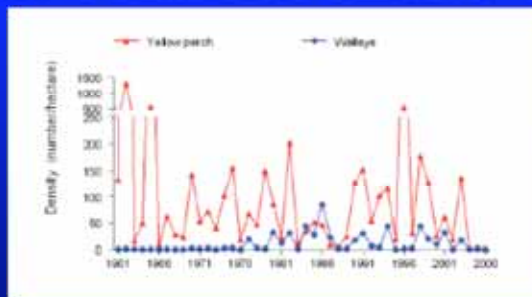
Initiate a statewide bait harvest permit system:

- ✓ *Time and water specific permit required for bait dealers to harvest wild bait*
- ✓ *Permit holder must retain records of their harvest and disposition of fish*
- ✓ *May not comingle wild bait harvest and any fish from fish farms*
- ✓ *Fish health inspections required*



Research: many unanswered questions!

- *Susceptible species*
- *Infectious virus concentrations*
- *Coolwater egg disinfection methods*
- *Survival rates of adults and young fish*
- **LONG TERM POPULATION IMPACTS**



Lake Erie YOY Recruitment

Outreach Materials for Anglers

WISCONSIN ANGLERS remember...

You can take live minnows bought from a Wisconsin bait dealer and left over after a fishing trip away from any state water and use them:

- again on that same water, or
- on other waters, but only if no lake or river water, or other fish were added to their container.

For complete rules and additional information on the VHS virus in Wisconsin, check the DNR website dnr.wi.gov

Catch On!

to Healthy Fish

- Drain water from boats and all equipment
- Inspect boat, trailer, and gear and remove plants and debris
- Don't move live fish away from a waterbody
- Buy minnows from Wisconsin bait dealers and only use leftover minnows under certain conditions

Check the DNR website • dnr.wi.gov • for more information

MINNOWS AS BAIT

What Wisconsin anglers need to know to prevent spreading the VHS fish virus

Bureau of Fisheries Management
June 2003



FISHERIES MANAGEMENT.....



Outreach Materials for Boaters

Wisconsin Boaters Keep Wisconsin's Waters Healthy

Viral Hemorrhagic Septicemia virus or VHS is a serious fish disease that has recently been discovered in Wisconsin. Please do your part to help control the spread of this disease and other invasive species.



- ▲ **DRAIN** all water from boat, motor, bilge, live wells, and fishing equipment (including minnow buckets) leaving the lake or shoreline
- ▲ **DO NOT TAKE LIVE FISH** or fish-eggs home from a water body. You may use leftover minnows only under certain conditions.
- ▲ **INSPECT and REMOVE** all aquatic plants, animals, and weed from your boat, motor, and equipment before leaving the boating.
- ▲ **REPORT** large numbers of dead or dying fish to the DNR. Toll-free at 1-800-TIP-WISCONSIN (847-8362).

For more information on the VHS virus, visit: dnr.wis.gov



VHS ALERT BOATERS & ANGLERS



Viral Hemorrhagic Septicemia (VHS) virus is affecting fish species in Wisconsin. The risk is very high for people who want to eat their catch. VHS can help control the spread of this virus and other invasive species.

- ▲ **INSPECT** boats, trailers, and equipment and **REMOVE** all visible plants, animals, and debris
- ▲ **DRAIN** water from boats, motors, bilges, and live wells before transporting away from a water or entering Wisconsin
- ▲ **NEVER MOVE** live fish away from a waterbody
- ▲ **BUY** minnows from a Wisconsin bait dealer
- ▲ **USE** leftover minnows only under certain conditions
- ▲ **KNOW** the law and report violations (1-800-TIP-WISCONSIN)

For more information on the VHS virus in Wisconsin, visit: dnr.wis.gov



FISHERIES MANAGEMENT.....



Outreach Materials for Kids



KIDS

Let's Keep Wisconsin Fish Healthy

Ask your parents to:

- Drain all water from their boat and equipment
- Don't move live fish between waters
- Report sick fish to the DNR

Tuck it in your tacklebox



FISHERIES MANAGEMENT.....



Public Service Announcements

Football star joins Wisconsin in tackling VHS

Top NFL draft pick Thomas an avid angler

MADISON – Joe Thomas, the most decorated offensive lineman in University of Wisconsin football history and a Cleveland Brown rookie, has signed on to help Wisconsin fight a viral fish disease threatening our native fish.

An avid angler, Thomas is featured in [TV and radio announcements](#) for the Department of Natural Resources describing how boaters, anglers and other water users can help hold the line against the spread of [viral hemorrhagic septicemia](#), or VHS.

"While I'm out protecting my quarterback, I want you out protecting our fish," he says, urging, "Let's tackle VHS together."

The TV spots began airing statewide July 16 through early fall, and the radio spots are being aired by the Wisconsin Broadcasters Association. Thomas' radio spots will start airing on radio stations in late August.

"We're really excited to have Joe Thomas on board," said Department of Natural Resources Secretary Scott Hassett. "His love of fishing is well known here in Wisconsin to keep VHS from spreading."

Thomas, who starred at left tackle for the Browns, was selected with the 10th pick in the NFL draft in May. He was the first Badger to win the Outland Trophy, given to the nation's best offensive lineman, in 2006. During that year, 2006, he allowed one sack and one quarterback pressure in 13 games.

Heading into the NFL draft in late April, Thomas was expected to be a first-round pick. Instead of being flown to New York to attend the draft, he stayed in Madison and was drafted by the Cleveland Browns.

"Coho salmon, Chinook salmon, rainbow trout, and bass are all great to fish for," Thomas said in an April 17, 2007, article why he planned to skip the New York City draft. "I'd rather spend a nice Saturday morning doing that than sit in a room for 12 hours." Plus, to me, draft day's not the important part. It's the day after that's important."

Thomas was selected third overall, going to the Cleveland Browns.



FISHERIES MANAGEMENT.....



Address <http://dnr.wi.gov/fish/vhs/>

Home | About | Topics | Contact Us

VHS and You: Keeping Wisconsin's Waters Healthy

You can feel it in the air - springtime is moving in. And with early trout season opening March 7 and the inland season opener just around the corner, we need you to [take steps](#) to help prevent the spread to VHS when you're out on Wisconsin's waters this season.

Information on the VHS rules

Visit [VHS Prevention](#) to see how the rules affect you.

[Most commonly asked questions about the VHS rules](#)

dnr.wi.gov/fish/vhs

More on VHS

- [Bait Preservation Methods](#)
New information on preserving your bait and also using [Dead Fish as Bait](#)
- [Preserving your Bait](#) (PDF 1.4 MB)
- [VHS 101](#)
Important facts about VHS including the history, how it spreads, symptoms in fish and more.
- [VHS Prevention](#)
Find out how you can help stop the spread of VHS.
- [VHS Q&A](#)

National VHS Website
(Joint DNR)

FOCUS ON FISH HEALTH

Fishing Wisconsin

VHS Information

- What is VHS?
- VHS Prevention
- VHS Distribution in Wisconsin
- Important Q & A on VHS
- Species affected by the Viral Hemorrhagic Septicemia (VHS) Federal Order (PDF 124K)
- Contacts

VHS News and Outreach

- Latest News
- Multimedia Resources
- Publications

Working in the Water?

- Harvesting Wild Bait
- Wild Bait Harvest Permit
- Disinfection Protocols (PDF 1074K)

DNR and DATCP Administrative Rules



Address <http://dnr.wis.gov/fish/>

Wisconsin Department of Natural Resources

Home | About | Topics | Contact Us

Fishing Wisconsin

- Fishing Report
- Management Plan
- Accessible Fishing
- Access Abandonment
- Angler's Club
- Early Trout Season
- License, Fees and Sales
- Regulations
- Season Dates
- Total Daily Bag Limit
- Tournaments
- Finding Fishing Reports
- Take Me Fishing!
- New to Fishing?
- Where to Fish
- Statewide Boat & Shore Fishing Access Inventory
- FAQ

Kids, Parents, Educators

Go Fish Wisconsin

got license? Give yourself a license to relax. Fishing can make you forget about your day-to-day stress and worries. That's a big part of fishing – it's the cheapest form of therapy you can get. Better yet, take someone with you.

Anglers' Favorites

- 2009 Fishing Report**
Reel in the latest fishing reports, tips and techniques in the 2009 Wisconsin Fishing Report.
- Places to Fish**
Find a place to fish whether from shore or boat throughout Wisconsin.
- Fishing Regulations**
Know the current fishing regulation pamphlets, which are specific to the species of fish and in some cases, the waterbody.
- Fishing Seasons**
Find out season dates for specific waters and species of fish.

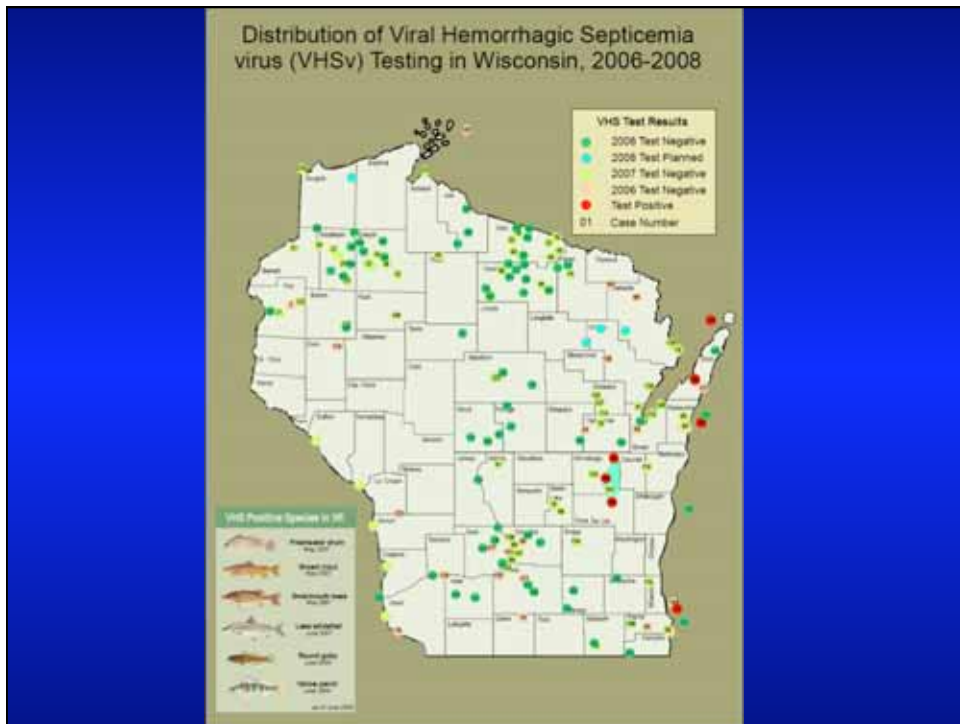
Upcoming Events

New Ways To Connect With Fish

- SUBSCRIBE to Fish Updates
- FOLLOW FISH

Features

2009 Wisconsin Fishing Report





STOP AQUATIC HITCHHIKERS![™]

Prevent the transport of nuisance species.
Clean all recreational equipment.

When you leave a body of water:

- Remove any visible mud, plants, fish or animals before transporting equipment.
- Eliminate water from equipment before transporting.
- Clean and dry anything that comes into contact with water (boats, trailers, equipment, clothing, dogs, etc.).
- Never release plants, fish or animals into a body of water unless they came out of that body of water.

PUB-WT-747 2004

SECTION 1 Chapter NR 40 is created to read:

**Chapter NR 40
INVASIVE SPECIES IDENTIFICATION,
CLASSIFICATION AND CONTROL**

NR 40.01 Purpose	NR 40.05 Restricted category
NR 40.02 Definitions	NR 40.06 Prohibited species
NR 40.03 Classification	NR 40.07 Invasive species permits
NR 40.04 Prohibited category	NR 40.08 Enforcement

NR 40.01 Purpose. The purpose of this chapter is to control invasive species in Wisconsin as part of the statewide program required by s. 28.22 (2) (a), Stats.

NR 40.02 Definitions. For purposes of this chapter:

(1) "Animal" means all vertebrate and invertebrate species, including but not limited to mammals, birds, reptiles, amphibians, fish and shellfish, as well as the eggs, larvae or young, but excluding insects, arachnids, nematodes, mollusks, crustaceans, rotifers, annelids, sponges, fungi or flowering plant seeds.

(2) "Boat" means any device capable of being used as a means of transportation on water.

(3) "Category" means a grouping of species that may be assessed, permitted, listed, planted, introduced, or transported in Wisconsin in a manner designated by administrative rule.

(4) "Control" means any measure, by any means, to prevent spread beyond a designated boundary.

Never waste a crisis!




The Future?

