

Welcome

Woodlawn State Park

January 8, 2007

*NYS Department of Environmental Conservation
Fish, Wildlife & Marine Resources*



Viral Hemorrhagic Septicemia (VHS) in New York State



Tonight's Meeting

- Introduce DEC Staff
- Discuss DEC's Role & Responsibilities
- History of VHS & DEC Actions to Date
- Regulatory Process & Emergency Regulations
- Outline Next Steps
- Questions



§ 1-0101.(1) "... It is hereby declared to be the policy of the State of New York to conserve, improve and protect its natural resources and environment ...

... in order to enhance the health, safety and welfare of the people of the state and their overall economic and social well being.



MISSION STATEMENT

Office of Natural Resources

“The mission of the Office of Natural Resources is to act on behalf of the People of the State of New York to develop and implement policies for the protection, management, and stewardship of the state’s natural resources and to provide for their use and enjoyment.”



ONR MISSION STATEMENT (cont'd)

“To ensure the protection of the integrity and diversity of New York State’s terrestrial and aquatic ecosystems and the landscape features - rivers, lakes, mountains, wetlands, clean water, estuaries, shorelines and upland areas which support those ecosystems.”



ECL § 11-0325 (2). Whenever it is determined by the Department of Environmental Conservation that an epizootic disease which endangers the health and welfare of native fish ... the department may adopt any measures or regulations with respect to the taking, transportation, sale, offering for sale or possession of native fish or feral animals deemed necessary in the public interest to prevent the development, spread or introduction of such disease.



ONR MISSION STATEMENT (cont'd)

***“To foster ethics in the use, enjoyment,
and management of natural resources.”***



Region 9 Fisheries Management
Department of Environmental Conservation



Viral Hemorrhagic Septicemia Virus (VHS) in New York State



Viral Hemorrhagic Septicemia Virus (VHS)

- Aquatic *rhabdovirus*
 - RNA based
 - Rod shaped
- Best known as disease of rainbow trout and other fish raised commercially in Europe
- Can cause high mortalities with severe economic consequences
- “Reportable” by the World Organization for Animal Health



Viral Hemorrhagic Septicemia Virus (VHS)

- Transmissible to fish of all ages.
- Affects many fish species
- Cold water disease, fishkills greater at low temps
- Survivors of the virus can be lifelong carriers
- Disease influenced by environmental stress





VHSV – Fish pathogen

Poses no risk to
human health !

Diagnosis of VHS

- Impossible to diagnose based on appearance alone, some fish may have severe signs, others none.
- Cell culture is only accepted method of diagnosis by:

American Fisheries Society

World Organization of Animal Health

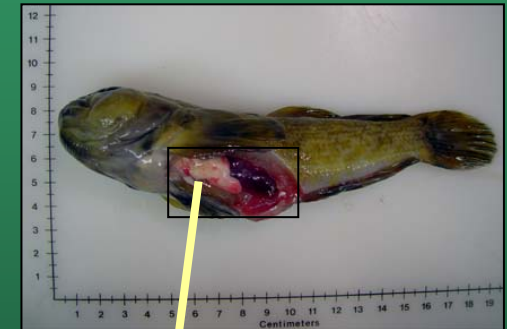


VHS – Gross Pathology

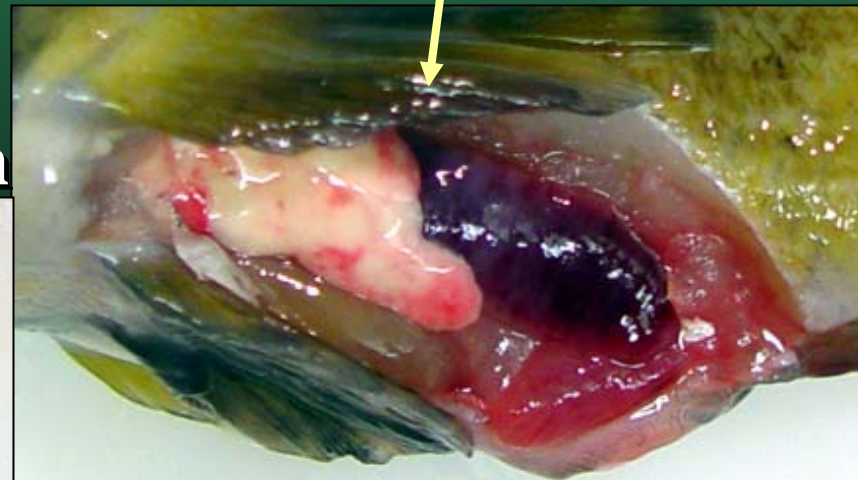
- **Causes fish to bleed internally**



BioMar



- **It reproduces in cells primarily in the kidney, spleen and liver**

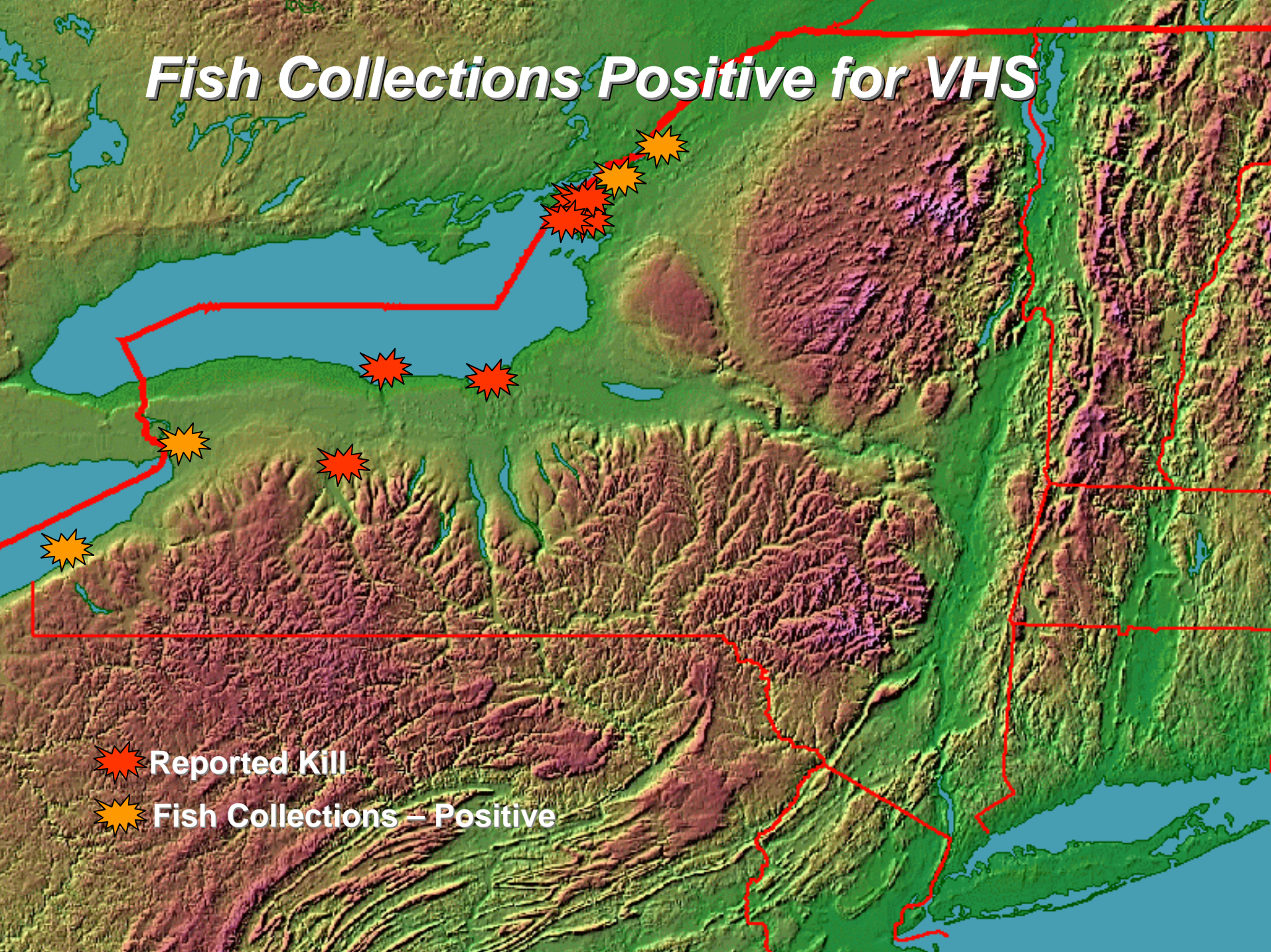


New York State VHS Timeline

- **May 2006:** mass mortalities of round gobies in St. Lawrence River and Lake Ontario.
- **May-June 2006:** multiple reports of large, dead muskellunge in Lake Ontario and St. Lawrence River.
- **June-July 2006:** mortalities of many fish species through Lake Ontario.
- **June 2006:** DEC, Cornell, SUNY-ESF monitor via “healthy fish collections.”
- **August 2006:** walleye mortality in Conesus Lake

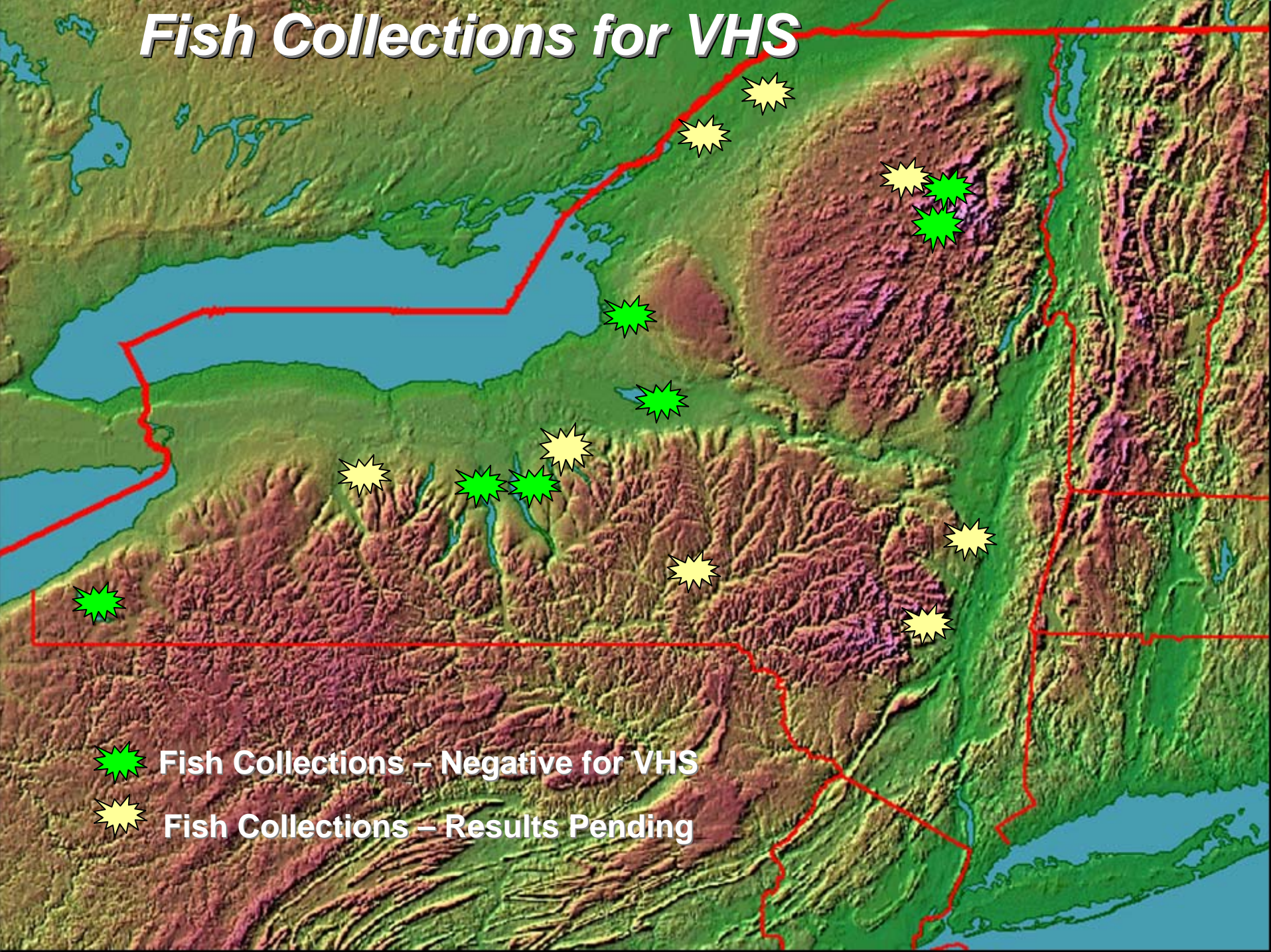


Fish Collections Positive for VHS



-  **Reported Kill**
-  **Fish Collections – Positive**

Fish Collections for VHS



 **Fish Collections – Negative for VHS**

 **Fish Collections – Results Pending**

Other VHS Outbreaks in Great Lakes

- **2003-'05:** Lake St. Clair (MI) - muskellunge
- **Summer '05:** Bay of Quinte (Ont.) - freshwater drum, muskellunge, round goby
- **May '06:** Lake Erie (OH) - freshwater drum, yellow perch, walleye, white bass, smallmouth bass
- **May '06:** Lake Ontario (Ont.) - freshwater drum, smallmouth bass, bluegill, crappie
- **June '06:** Lake St. Clair (MI) - gizzard shad, redhorse sucker, bluntnose minnow, northern pike, yellow perch



Fish tested VHS positive in Great Lakes

muskellunge

round goby

burbot

freshwater drum

yellow perch

walleye

white bass

smallmouth bass

bluntnose minnow

redhorse sucker

gizzard shad

northern pike

emerald shiner

crappie

bluegill



VHS - Summary

- VHS an “emerging” disease of freshwater fish in North America.
- VHS detected in Lake Ontario, Lake Erie, Lake St. Clair, the St. Lawrence River, the Niagara River and Conesus Lake.
- Type IV b strain of VHS has been isolated from various species



VHS – Concerns in New York State

- The Great Lakes VHS affects many different types of fish
- Potential for fish mortality and economic impacts
- Pathways- several potential ways VHS can be spread
- **Containment**-can we minimize risks, spread of VHS?!



Potential Pathways

- Natural fish movements
- Birds
- Ballast water discharge
- Recreational boating / angling
- Fisheries management activities
- Baitfish (commercial, personal)
- Transfer of fish from one body of water to another (importation, stocking)



***We are trying to avoid
situations like this***



smallmouth bass fish kill on Lake Ontario



Response To “Greatest Risk” Pathways

- Courses of action:
 - *DEC Field Operations*
 - *DEC Hatchery Operations*
 - *Emergency Regulations*



Goals of Actions:

- Protect fisheries resources
- Minimize spread of VHS
- Protect DEC hatchery system
- Determine distribution in NY
- VHS impacts to fisheries: fish health, population effects?



Carp die-off from koi herpes virus



Actions:

DEC Field Operations

- **Work with other agencies;**
 - *NYSDEC, Ag & Markets*
 - *Other Great Lakes states*
 - *Federal – USDA-APHIS, USFWS*
- **Field collection SOPs**
- **VHS monitoring program**



Actions:

DEC Hatchery Operations

- VHS testing of wild broodstock
 - *Chautauqua Lake, Oneida Lake, Lake Ontario, Cayuga Lake, Raquette Lake, Little Clear Pond*
- No transfer of fish from Salmon River Hatchery
 - *Other hatcheries*
 - *Stocking only to Great Lakes*



Actions:

Emergency Regulations

- 11/21/06 + 90 days
- Personally collected baitfish only used in that collection water (live or dead!)
- Maximum of 100 bait fish collected and or possessed for personal use (live or dead!)



Actions:

Emergency Regulations

- No commercial baitfish collected from VHS + waters
- Require disease-free fish for importation, stocking, & placement into NY waters
 - Stocking permits, bait fish, hatcheries, farm fish ponds, fishing preserves



Actions:

Disease Testing:

All Fish:

- Viral Hemorrhagic Septicemia (VHS)
- Furunculosis
- Enteric Red Mouth
- Infectious Pancreatic Necrosis Virus (IPN)
- Spring Viremia of Carp (Infectious carp dropsy)
- Heterosporis

Trout and Salmon

- Whirling disease
- Bacterial kidney disease (BKD)
- Infectious Hematopoietic Necrosis Virus (IHN)



Actions:

Fish health inspections accepted by

- ***AFS certified fish pathologists***
- ***AFS certified fish health inspectors***
- Others with demonstrated capability to perform fish health inspections

Licensed veterinarians

Government employees

University or college personnel

Private laboratory personnel



Actions:

Fish health inspection methods and procedures recognized by:

- *American Fisheries Society* 
- *World Organization of Animal Health* 

Other, currently experimental
methods not accepted



Actions:

- DEC website
- Contact bait fish collectors/sellers, hatcheries, fishing preserves, farm pond owners, stocking permit holders and scientific collection applicants:
 - VHS, where present*
 - USDA-APHIS federal order*
 - Preventative measures*
 - Emergency (and proposed) regulations*
- Public information meetings
- Bait license survey



DEC Proposed Regulations:

- Same as Emergency Regulations
- Public comment period (45 days)
December 6, 2006-January 22, 2007
- Public information meetings
9 locations
Not for formal comment
- Survey of bait fish collection/ sale licensees
- Amendments?



Federal Order USDA-APHIS

- Effective October 24, 2006
- Under authority of AHP Act 2002
- For **live** fish of listed species (37)

Prohibits import from Ontario and Quebec

Prohibits interstate movement from **IL, IN, MI, MN, NY, OH, PA, WI**



Fish List

- Atlantic cod
- Black crappie
- Bluegill
- Bluntnose minnow
- Brown bullhead
- Brown trout
- Burbot
- Channel catfish
- Chinook salmon
- Coho salmon
- Emerald shiner
- Freshwater drum
- Gizzard shad
- Grayling
- Haddock
- Herring
- Japanese flounder
- Largemouth bass
- Muskellunge
- Pacific cod
- Northern Pike
- Pink salmon
- Pumpkinseed
- Rainbow trout
- Redhorse sucker
- Rockbass
- Rockling
- Round goby
- Smallmouth bass
- Sprat
- Turbot
- Walleye
- White bass
- White perch
- Whitefish
- Yellow perch



Amended Federal Order

Allows for some interstate movement;

- To **approved** fish processing facilities
- To research and diagnostic labs
- Tested and certified VHS -
- OK with recipient state rules



What else can we do?

- Never release live bait fish into a water
- Never stock fish without the proper permit
- Never move fish from one water to another without the proper permits
- Clean out / disinfect live wells
- Clean off your boat / remove vegetation



Formal NYS Comments

- Write:

Shaun Keeler

NYS-DEC Fisheries

625 Broadway

Albany, NY 12233-4753

- Via Email:

fwfish@gw.dec.state.ny.us



Questions?

*NYS Department of Environmental Conservation
Fish, Wildlife & Marine Resources*

