Viral Hemorrhagic Septicemia (VHS) entered North America from Europe years ago as a systemic infection of salmon and trout. A strain of this rhabdovirus is believed to have mutated into a form infecting warm water fishes and now has been found in many Great Lakes fish species. VHS has been linked to die offs of freshwater drum, yellow perch, muskellunge round gobies and other species. The virus has been found in several other species which have not exhibited symptoms, suggesting that some fish may act as carriers of the disease.

The Federal Order on VHS
Implications for Ohio Fisheries

In October 2006 the U.S. Department of Agriculture’s Animal and Plant Health Inspection Service (APHIS) issued a draft order restricting the transportation of live fish on a list of 37 infected species among Great Lakes states and provinces. The affected area includes:

- Minnesota
- Wisconsin
- Illinois
- Indiana
- Michigan
- Ohio
- Pennsylvania
- New York
- Ontario
- Quebec

The Federal Order was amended in November 2006 to allow interstate shipment of fish originating in the affected area if those shipments have tested negative for VHS virus using approved methods.

### Regulated Species of Live Fish

| Atlantic cod | Muskelunge |
| Black crappie | Pacific cod |
| Bluegill | Pike |
| Bluntnose minnow | Pink salmon |
| Brown bullhead | Pumpkinseed |
| Brown trout | Rainbow trout |
| Burbot | Redhorse (Moxostoma species) |
| Channel catfish | Rock bass |
| Chinook salmon | Rockling |
| Coho salmon | Round goby |
| Chum salmon | Smallmouth bass |
| Emerald shiner | Sprat |
| Freshwater drum | Turbot |
| Gizzard shad | Walleye |
| Grayling | White bass |
| Haddock | White perch |
| Herring (Clupea species) | Whitefish |
| Japanese flounder | Yellow perch |
| Largemouth bass |

### Implications for Fisheries Activities

Most recreational and commercial fishery activities will be affected by the ban on interstate movement of live fish although the effects on individual activities or businesses will vary.

#### Live Bait Harvesting and Shipping

The most common baitfishes used in Ohio are emerald shiner, fathead minnow, golden shiner, and in lesser numbers, goldfish. Of these, only emerald shiner is on the list of regulated species. Bluntnose minnow also are on the list, but while widespread in Ohio, bluntnose are not commonly sold as bait. VHS has not yet been reported in fathead minnow or golden shiner.

Emerald shiners harvested in Ohio waters of Lake Erie usually satisfy the Ohio bait market during spring and early summer, but in late summer and autumn the majority of emerald shiners are imported from other states. Most of these are shipped from the New York waters of Lake Erie, with smaller quantities occasionally coming from Wisconsin or the Ohio River.
Implications for Fisheries Activities (continued)

The state of New York in November 2006 prohibited all commercial collection of baitfish from Lake Erie. Therefore, emerald shiners from that area will not be available to the Ohio bait market in 2007. Likewise, shipments of live emerald shiners from Wisconsin also will be prohibited. Possible actions by Ohio’s live bait industry to deal with potential emerald shiner shortages include:

- Increased use of golden shiners imported from Arkansas and fathead minnows imported from Arkansas and South Dakota. If APHIS removes Minnesota and Wisconsin from the list of affected states, supplies of fathead minnows should improve.

- Increased use of frozen or salted emerald shiners that are captured when they are locally abundant.

- Pond storage of emerald shiners captured while locally abundant and held until mid-summer through autumn. Emerald shiners held in ponds typically experience considerable warm-weather mortality. Ponded shiners likely will require temperature control, aeration and feeding to be held for extended periods.

Live Fish Hauling for Human Consumption
Live fish on the regulated species list may be transported out of a VHS-infected state for slaughter if:

1. The fish are for human consumption;
2. If the fish are not tested for VHS, they must be accompanied by a valid form VS 1-27 issued by an APHIS area office;
3. The fish must be transported to a state-inspected slaughter facility. The facility must discharge waste into a municipal sewage system or settling pond which is disinfected according to EPA and state regulations. Offal and carcasses must be either rendered or composted.

Live Fish Hauling Not for Consumption
Many fish species on the regulated list are produced in aquaculture facilities or captured in the wild and then shipped for restocking into other waters.

These regulated species captured or produced in Ohio cannot be transported across Ohio’s borders without state or federal documentation that the fish have tested negative for VHS under protocols listed in the Amended Federal Order of November 2006.

Live fish transported in Ohio for stocking include white bass, freshwater drum, yellow perch, largemouth bass, bluegill, rainbow trout, channel catfish and others which appear on the list of regulated species.

Non-Regulated Species - Several species of wild-captured foodfish are commonly transported alive in Ohio, including carp, buffalo, and goldfish. These three species and any others not appearing on the regulated species list may be shipped out of Ohio without inspection.

Fish Originating From Other States – Live fish on the regulated species list that are shipped from non-affected states into or across Ohio are not subject to the Federal Order. Shippers should carry appropriate documentation demonstrating the origin of the fish.

Sport Fishing and Tournaments
Sport anglers are under the same restrictions as commercial fish transporters – no live fish on the regulated species list can be transported across a state or provincial boundary in the affected area regardless of the distance or purpose involved. This includes emerald shiners as bait and commonly harvested sport species such as walleye, smallmouth and largemouth bass, yellow perch, white bass, channel catfish, muskie, northern pike, black crappie and others.

Tournament organizers should be aware that the Federal Order restricting the movement of certain species of live fish across state and provincial lines in the Great Lakes region will affect tournaments in which boats fish or travel the waters of more than one state or province while carrying fish in live wells.

The options open to tournament organizers include:

1. Restrict fishing to the waters of the state or province in which the tournament headquarters is located;
2. If fishing across boundary lines, measure and document the fish at the point of capture and then release;
3. If fishing across boundary lines, kill the fish before transporting them across the waters of another state or province.

Penalties for APHIS Violations
Violations of APHIS orders fall under the Animal Health Protection Act (AHPA) that was signed into law as part of the 2002 Farm Bill. In a statement issued in 2002, the U.S. Dept. of Agriculture said:

“The AHPA increases civil penalties to a maximum of $50,000 for an individual, although it remains at a $1,000 maximum for first-time offenders at ports of entry when such offenders are carrying the products for personal use and not for commercial gain. Civil penalties for other than individuals are increased to a maximum of $250,000 per violation with a maximum of $500,000 in a single adjudication.” (http://oars.aphis.usda.gov/lpa/inside_aphis/featureAHPA.html)

Violators of the Federal Order on VHS may also be in violation of the federal Lacey Act. The Lacey Act Amendments of 1981 say:

“Under this law, it is unlawful to import, export, sell, acquire, or purchase fish, wildlife or plants taken, possessed, transported, or sold: 1) in violation of U.S. or Indian law, or 2) in interstate or foreign commerce involving any fish, wildlife, or plants taken possessed or sold in violation of State or foreign law.

“The law covers all fish and wildlife and their parts or products, and plants protected by the Convention on International Trade in Endangered Species and those protected by State law. Commercial guiding and outfitting are considered to be a sale under the provisions of the Act.” (http://www.fws.gov/laws/laws_digest/lacey.html)

Updates to the Federal Order
Changes and updates to the Federal Order on VHS will appear on the APHIS Website: http://www.aphis.usda.gov/vs/aqua/