

Assessing the Risk of Introduction through the Baitfish Pathway

Insights from the Law Enforcement Committee



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Ontario

Québec

CORA
(headquarters, MI)

Sault Ste. Marie (MI/ON)

Ottawa



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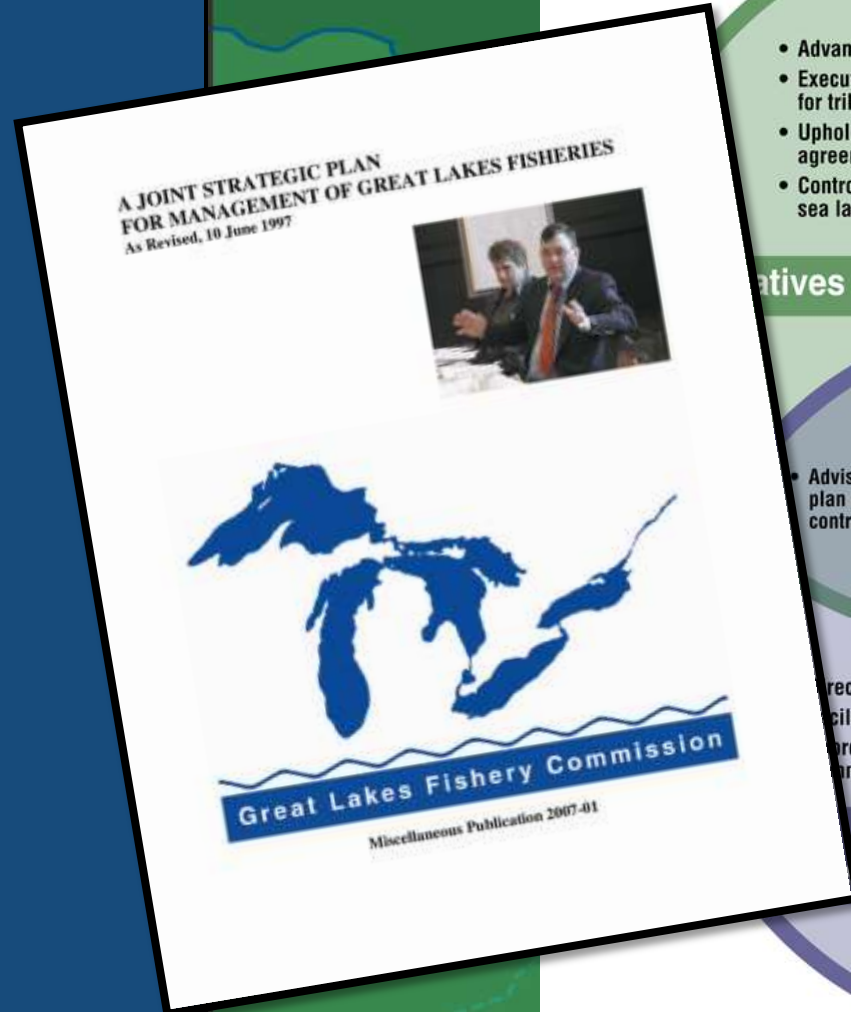
Indiana

Ohio

Cleveland

Pennsylvania

Managing the Great Lakes Fishery



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- Advise and plan sea lamp control

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Lake Committee Membership by Lake

LAKE SUPERIOR COMMITTEE
TSE Treaty Authority
Chippewa-Ottawa Resource Authority
Great Lakes Indian Fish & Wildlife Commission
Michigan Dept. of Natural Resources
Minnesota Dept. of Natural Resources
Ontario Ministry of Natural Resources
Wisconsin Dept. of Natural Resources

LAKE MICHIGAN COMMITTEE
Chippewa-Ottawa Resource Authority
Illinois Dept. of Natural Resources
Indiana Dept. of Natural Resources
Michigan Dept. of Natural Resources
Wisconsin Dept. of Natural Resources

LAKE HURON COMMITTEE
Chippewa-Ottawa Resource Authority
Michigan Dept. of Natural Resources
Ontario Ministry of Natural Resources

LAKE ERIE/LAKE ST. CLAIR COMMITTEE
Michigan Dept. of Natural Resources
New York State Dept. of Environmental Conservation
Ohio Dept. of Natural Resources
Ontario Ministry of Natural Resources
Pennsylvania Fish and Boat Commission

LAKE ONTARIO COMMITTEE
New York State Dept. of Environmental Conservation
Ontario Ministry of Natural Resources

FEDERAL AGENCIES SIGNATORY TO THE PLAN

Fisheries & Oceans
Pêches et Océans
Canada

National Marine
Fisheries Service

U.S. Fish & Wildlife Service

U.S. Geological
Survey, Biological
Resources Division

The Great Lakes Fishery Commission facilitates the Joint Strategic Plan process.

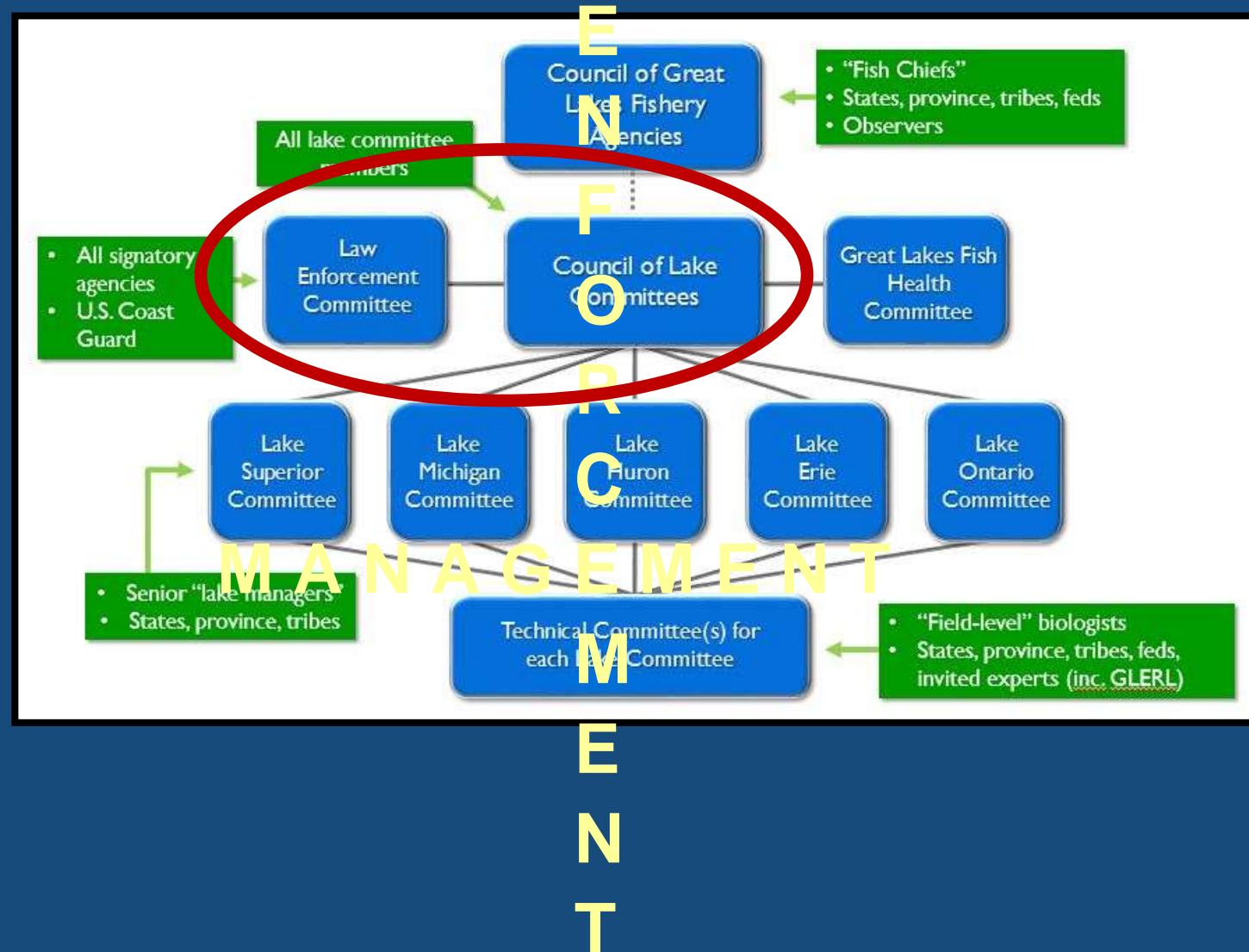


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Mississippi

Enforcement—Management Nexus





1854 Treaty Authority (headquarters)



NAC

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OR



1. Effective management depends on good enforcement
2. Effective enforcement informs good management



Effective AIS Enforcement

AIS regulations + officers ≠ effective enforcement

Measure effectiveness?

- Rate of illegal activity
 - Low = good = achieve management objectives
- Response from users
 - Compliance, deterrence
- Enforceable
 - **Commensurate among jurisdictions**

	SILVER	BLACK	BIGHEAD	GRASS	
				DIPLOID	TRIPLOID
ILLINOIS	All activities permitted except for aquaculture purposes	All activities permitted except for aquaculture purposes	All activities permitted except for aquaculture purposes	All activities permitted except for aquaculture purposes	All activities permitted except for aquaculture purposes
INDIANA	All activities banned	All activities banned	All activities banned	All activities banned	may be cultured & sold with permit & reporting requirements
MICHIGAN	All activities banned	All activities banned	All activities banned	All activities banned	All activities banned
MINNESOTA	All activities banned	All activities banned	All activities banned	All activities banned	All activities banned
OHIO	All activities banned	All activities banned	All activities banned	All activities banned	May be imported and sold with permit from Chief, Ohio Div of Wildlife
PENNSYLVANIA	All activities permitted except importation	All activities permitted except importation	All activities permitted except importation	All activities permitted except importation	All activities permitted except importation
NEW YORK	All activities permitted	All activities permitted	All activities permitted	All activities banned	certified triploid can be cultured in waters (permit req'd) no lgr than 5 acres with no in- or outlet
WISCONSIN	All activities permitted except possession*, importation regulated**	All activities permitted except possession*, importation regulated**	All activities permitted except possession*, importation regulated**	All activities permitted except possession*, importation regulated**	All activities permitted except possession*, importation regulated**
ONTARIO	All activities permitted except culture	All activities permitted except culture	All activities permitted except culture	All activities permitted except culture	All activities permitted except culture

† Listed as a game fish, therefore possession is prohibited

*Importation of ANY fish requires a permit form the Dept. of Agriculture; importation of any NONNATIVE fish requires an additional permit from the DNR

Disparities: Location of Regulations

Annual Fishing Guide

- Majority of jurisdictions publish all/most bait regulations here
- List of prohibited species typically included

Administrative Code

- Ohio, Pennsylvania, Wisconsin → publish bait regulations
- Majority of jurisdictions publish prohibited/invasive/injurious species lists here
- Personal v. commercial bait regulations

Disparities: Definition

Definition of “bait”

1. White list, e.g. specific species allowed
2. Black list, e.g. certain prohibited species
 - a) Looking for “carp” or “grass carp”

Distinctions about state of bait

1. None
2. Live, dead
3. Whole, parts


Bait Definitions – Defined **Allowed** Bait Species

Michigan	“Any fish and frogs...when legally taken” ... “native crayfish” ... “minnows: chubs, shiners, dace, stonerollers, sculpins (muddlers), mudminnows, and suckers of a size”
Minnesota	“...a variety of live or dead bait including worms, night crawlers, insects and larva” ... “if using minnows or leeches...restrictions apply” ... “crayfish”
Wisconsin	Legal sized gamefish, minnows: suckers, mudminnow, madtom, stonecat, killifish, stickleback, trout perch, darters, sculpins, all species Cyprinidae family except carp, goldfish). crayfish, frogs
Illinois	shad, alewives, minnows (all Cyprinidae species except carp, goldfish), crayfish bluegill, sunfish
Indiana	any live wild/game fish legally caught, minnows (all Cyprinidae species), sucker, brook stickleback, live gizzard shad, live threadfin shad, live alewife, crayfish, live goldfish

Bait Definitions – Defined **Allowed** Bait Species

Ohio	“minnows, crayfish, hellgrammites, and other larval aquatic insects, suckers not > 10 inches in length, brook lampreys, smelt, brook silversides, brook sticklebacks, gizzard shad, trout-perch, sculpins, darters, topminnows, and mudminnows”
Pennsylvania	“all forms of minnows; suckers, chubs, Fallfish, lampreys; Gizzard Shad 8 inches or less; and all forms of darters, killifishes and stonecats (except those listed as threatened or endangered species)” ... “Legally taken gamefish”
New York	<p><i>Commercial:</i> 20 species included on “green list” + alewife, rainbow smelt, mummichog, blueback herring, Atlantic menhaden, American eel (certain areas)</p> <p><i>Personal:</i> minnows (except carp and goldfish), killifish, mudminnows, darters, sticklebacks, stonecats, smelt, alewives, suckers</p> <p>“Any <u>dead</u> fish, or <u>parts thereof excluding eggs</u> that are legal to possess...can be used in any water body where it is legal to use fish as bait”</p>
Ontario	48 species of live fish ... “Bait includes <u>live or dead</u> animals, plants or <u>parts</u> ”
Quebec	“Generally speaking, the use (including the possession and transportation) of baitfish is prohibited” some limited use allowed (season/species/zone specific)

Bait Definitions – *Defined* **Prohibited** Bait Species

Michigan	“Lampreys, <u>live</u> carp, goldfish, <u>live</u> gobies” ... “non-native crayfish may not be used for bait, whether <u>alive or dead</u> ” ... unlawful species to possess (bighead, black, silver, grass carp)
Minnesota	“Cannot use <u>whole or parts</u> of game fish, goldfish or carp for bait” ... illegal fish to possess (black, bighead, grass, silver carp)
Wisconsin	“ <u>Live</u> crayfish...alewife (except on Lk MI), goldfish  Asian carp (black, silver, bighead, grass) cross-designated as ‘invasive species’ and ‘rough fish species’ – exceptions to possession, transportation, and transfer (not live) prohibitions exist
Illinois	“ <u>Live</u> rusty crayfish and red swamp crayfish” injurious species (bighead, silver)
Indiana	“Carp cannot be used as <u>live</u> bait at any location” Species illegal to possess (bighead, black, silver)

Bait Definitions – *Defined* **Prohibited** Bait Species

Ohio	“bighead carp, silver carp”
Pennsylvania	“goldfish, comets, koi and Common Carp “.... Prohibited species (black, bighead, silver)
New York	“ Carp , goldfish, lamprey larvae, round goby”
Ontario	List of <u>live</u> invasive species (black, bighead, silver, grass carp)
Quebec	List of 25 species illegal to use as bait; <u>live or dead</u> , <u>whole or cut up, gametes or eggs</u> Prohibited species (black, bighead, silver, grass carp)

Disparities: Transportation of Live Bait

Restrictions based on area

1. Blanket restriction
2. Water body dependent (e.g. bait caught in Lake Michigan cannot be transported to inland waters)

Restrictions based on species

1. Blanket restriction
2. Bait species dependent (e.g. alewife cannot be transported from water body where legally captured)

Transportation not addressed

Bait Definitions – Transportation

Michigan	-----
Minnesota	Transport permitted with water exchange, bait # restrictions ... “importation of live minnows and leeches into state prohibited”
Wisconsin	“A wild bait harvest permit is required to harvest minnows and transport them away from any water of the state live” Movement of any live fish away from water body prohibited with one exception: transport of baitfish purchased from licensed bait dealer permitted only if no lake or river water, or other fish were added to their container
Illinois	“Collected live bait may not be transported between water bodies”
Indiana	Gizzard shad, threadfin shad, alewife cannot be transported live from specific water bodies (listed in regulations)

Bait Definitions – Transportation

Ohio	“It is unlawful to transport and introduce any aquatic species (fish, invertebrate, plant) from one body of water to another”
Pennsylvania	“Importation of any fish from another state is prohibited (without consent) and transferring any fish from one PA watershed to another where that species is not always present [or out of state] is also prohibited”
New York	“Certified baitfish purchased from a bait dealer can be transported overland in a motorized vehicle and used in any water body where it is legal to do so” “Transportation of personally harvested baitfish overland by a motorized vehicle is prohibited except within a designated overland transportation corridor”
Ontario	Commercial movement restrictions: no GL bait to inland waters ... “Crayfish may not be transported overland” ... “illegal to bring any crayfish, salamanders, live fish or leeches into ON for use as bait”
Quebec	Movement of baitfish generally prohibited, exceptions by zone/species/season (those not on prohibited list); importation prohibited Generally require bait to be dead (limited exceptions exist)

Bait Definitions – Keep/Release/Disposal

Michigan	“A person shall not use or release baitfish in any public waters of the state, unless the baitfish are attached to a hook”
Minnesota	“[To keep bait], must exchange water in bait buckets w/tap or bottled water (except when ice fishing). “Cannot dispose of unused or unwanted minnows or leeches in any Minnesota water.”
Wisconsin	It is unlawful “to release unused bait into Wisconsin’s lakes, ponds, rivers, and streams”
Illinois	-----
Indiana	“Minnows <i>should not be</i> released into the water after you finish fishing”

The VHS regulations below only concern use of those fish species (and their associated roe) that are listed as Susceptible Fish Species for VHS (as indicated in the box on page 32). Therefore, use of all other fish species as bait (and their associated roe) is not covered by these regulations.

VHS Management Area Regulations for Bait (including baitfish or roe) use by Harvest Type

Note: All use of baitfish and roe is subject to Provision 3 below.

Bait Harvest Type	Collected from VHS Positive Area	Collected from VHS Surveillance Area	Collected from VHS Free Area
Personally Harvested Bait	Use restricted to Positive Area waters	Use restricted to Surveillance Area or Positive Area waters	Use allowed in all waters
Commercially Harvested or Purchased Bait – <u>Uncertified</u>	Use restricted to Positive Area waters	Use restricted to Surveillance Area or Positive Area waters	Use allowed in all waters
Commercially Harvested or Purchased Bait – <u>Certified</u>	Use allowed in all waters	Use allowed in all waters	Use allowed in all waters

General Statewide Provisions

1. A person shall not stock baitfish, live fish or roe in public waters of the state prior to receiving a Fish Stocking Permit from the department and the permit must be in possession when transporting and stocking the fish. A person shall not import any uncertified baitfish species found on the list of Susceptible Fish Species. This also is a violation of the federal order.
2. Fish caught in a waterbody should only be released into the waterbody where originally caught and not transferred into another location where the fish could not have freely moved to.
3. A person shall not use or release baitfish in public waters of the state unless the baitfish are from a live tank. Use of roe is restricted per the specific regulations outlined in the Management Area Regulations for Viral Hemorrhagic Septicemia virus (VHS).
4. A person who trailers a boat over land shall drain all water from the live well(s) and the bilge of their boat upon leaving any body of water.

VHS Clinical Signs

Photos from Dr. Mohamed Faisal, MSU



Bait Definitions – Keep/Release/Disposal

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Wisconsin	It is unlawful “to release unused bait into Wisconsin’s lakes, ponds, rivers, and streams”
Illinois	-----
Indiana	“Minnows <i>should not be released</i> into the water after you finish fishing”

Disparities: Transportation and VHS

Regulations reference VHS Rules

1. No
2. Yes

Bait Definitions – VHS Referenced in Regulations

Michigan	yes
Minnesota	yes
Wisconsin	yes
Illinois	yes
Indiana	no
Ohio	yes
Pennsylvania	yes
New York	yes
Ontario	yes
Quebec	no

Disparities: Transportation and VHS

Regulations reference VHS Rules

1. No
2. Yes
 - a) Area-specific
 - b) Species-specific
 - c) Certification-based
 - d) Harvest-method/type
 - e) Water-exchange

Disparities: Others

Gear Types

1. Cast nets (size variations)
2. Shad scoops (size variations)
3. Minnow traps (size/material variations)
4. Minnow seines (size/mesh variations)
5. Dip nets (size/mesh restrictions)
6. Hook and line
7. Hands

Transport Quantity

1. Minnesota → not more than 12 minnows without commercial license
2. Indiana → not more than 500 minnows (possess), 100 crayfish (transport)
3. Ohio → not more than 100 crayfish or 500 in the aggregate of [defined baitfish]; however, smelt, hellgrammites, other larval aquatic insects, and preserved minnows may be possessed and sold in unlimited numbers;

Summary of Regulation Analysis

1. Clear lack of consistency among jurisdictions with respect to baitfish regulation
2. Many variables/elements to regulations to consider
3. Risk Assessment: baitfish pathway presents clear risk for introduction of grass carp (diploid)

LAW Request to the CLC

Options to reduce or eliminate regulatory gaps:

1. Thorough review of regulations in each jurisdiction
2. Comprehensive report of all regulatory elements/components
3. Review of individual regulatory elements/components from a legal, fishery management, and law enforcement perspective
4. Recommendations for future regulations

Involvement of Council of Great Lakes Governors

1. Fits with “high priority” AIS issue identified by council
2. Phased approach – start with Lake Erie jurisdictions (OH, MI, ON)
 - a) Asian carp
 - b) Funding available
3. Next steps
 - a) Development of formal proposal
 - b) Identification of party(ies) to conduct review(s)
 - Consistent with work currently being done by Mississippi River Basin ANS Panel

