NAME OF SPECIES: Silver carp (Hypophthalmichthys molitrix)

A. CURRENT STATUS AND DISTRIBUTION	
1. In Wisconsin?	a. YES ☐ NO ☒
	b. Abundance:
	c. Geographic Range:
	d. Type of Waters Invaded (rivers, ponds, lakes, etc): (in other states) lakes, large rivers
	e. Historical Status and Rate of Spread in Wisconsin:
2. Invasive in Similar Climate Zones	YES ☒ NO ☐ Where: northern IL
3. Similar Habitat Invaded Elsewhere	YES ☒ NO ☐ Where: Mississippi River, Illinois River, Ohio River
4. In Surrounding States	YES ☒ NO ☐ Where: IN, IL, Iowa
5. Competitive Ability	High: These fish rely on a highly available food source (plankton) and rapidly grow to a large size, they also rapidly reproduce, making them highly competitive with other planktonic organisms, including larval fish. They can survive in a large range of temperatures and low oxygen environments. Low:
B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS	
1. Temperature:	Range: 0 - 40 deg. C
2. Spawning Temperature:	Range: 17 - 26.5 deg. C
3. Number of Eggs:	Range: fecundity ranges from 265,000 to 2 million eggs/fish
4. Preferred Spawning Substrate:	need waterbody with some current (like large river systems)
5. Hybridization Potential:	hybridize with bighead carp - resulting hybrids likely have impacts similar to both parent species
6. Salinity Tolerance	Fresh: ☒ Marine: ☐ Brackish: ☒
7. Oxygen Regime	Range: larvae tolerant of oxygen levels as low as 0.5 mg/L
8. Water Hardness Tolerance	Range:
9. Easily confused for Native Species?	List: juveniles may be confused with other juvenile or small adult fish (some of which are commonly used for bait)

C. DAMAGE POTENTIAL	
1. Likelihood of Damage	a. Presence of Natural Enemies:
	b. How well introductory and expansion pathways can be described and quantified: Brought to the US in 1973 by private fish farmer in Arkansas - shortly after was used by other facilities for phytoplankton control in aquaculture ponds, etc. By 1980s had escaped into natural waters; also, some intentional introductions/stocking likely occurred; were alos brought to the US to be sold as food fish.
2. Environmental Impacts	a. Alteration of ecosystem composition, structure and function: Bighead carp are planktivorous and attain large size, so they have the potential to deplete zooplankton populations. Reduced availability of plankton could lead to reductions in populations of native animals that eat the plankton, including all larval fish, some adult fish, and native mussels
	c. Damage to ecosystem resilience/sustainability:
	d. Loss of biological diversity: Might decrease populations of filter feeding fish - those most at risk include paddlefish, bigmouth buffalo, and gizzard shad
	e. Abiotic modifications (affects on turbidity, H2O chemistry, etc.):
	f. Biotic effects on other species (loss of cover, nesting sites, forage, changing competitive relationships:
D. NET SOCIO/ECONOMIC IMPACT	
1. Positive aspects of the species to the economy/society:	Effect: May help to control algae in aquaculture facilities; used for food mostly in Asian countries/communities
2. Direct and indirect effects of the invasive species:	Effect:
3. Type of damage caused by organism:	Effect: potential to impact commercial and recreational fishing industries
Industries affected by invasive:	Effect: fishing
4. Loss of aesthetic value affecting recreation and tourism:	Effect: Silver carp swim close to the surface of the water and are known to jump in response to boat motors. Boater, anglers, and others recreating on the water risk severe injury if hit by one of these fish.
5. Increased cost to a sector (monitoring, inspection, control, public education, modifying practices, damage repair, lower yield, loss of	Effect:

export markets due to quarantine:	
6. Cost of prevention or control relative to cost of allowing invasion to occur (cost of prevention is borne by different groups than cost of control):	Effect:
7. Cost at different levels of invasion:	Effect:
E. CONTROL AND PREVENTION POTENTIAL	
1. Costs of Prevention (including Education):	
2. Responsiveness to Prevention Efforts:	Once fish enter a system, they are very difficult to control because they can swim large distances. However, they could be included in other public education efforts aimed at preventing the release of live bait and preventing other intentional releases/stocking.
3. Detection Capability:	
4. Control Tactics Effective:	Mechanical: ☐ Biological: ☐ Chemical: ☐
5. Efficacy/Feasibility of Control (effort, # of staff):	
6. Cost of Control:	High: ☐ Medium: ☐ Low: ☐
7. Non-Target Effects of Control:	no control found that selects for only this species
8. Threshold at which control would be attempted:	
9 Efficacy of Monitoring:	