NAME OF SPECIES: Red shiner (Cyprinella lutrensis)

A. CURRENT STATUS AND DISTRIBUTION	
1. In Wisconsin?	a. YES ☒ NO ☐
	b. Abundance: unknown - this is listed on the DNR website as a "transient non-native species" and it appears to be unknown whether or not it's established in WI currently
	c. Geographic Range: possibly in Lake Michigan (reported in lagoons near Chicago), its native range may extend into far southwestern WI (Mississippi drainage)
	d. Type of Waters Invaded (rivers, ponds, lakes, etc): (elsewhere) creeks and small to medium rivers, pools, runs, and riffles
	e. Historical Status and Rate of Spread in Wisconsin: Reported in Lake Michigan in 1958, but this report was then questioned in 1983 as no evidence was found to support it.
2. Invasive in Similar Climate Zones	YES ☒ NO ☐ Where: native to areas in the Mississippi drainage with similar climate to southern WI, including IL and Iowa, also found in northwest IN
3. Similar Habitat Invaded Elsewhere	YES ☒ NO ☐ Where: stream in Massachusets
4. In Surrounding States	YES ☒ NO ☐ Where: see above
5. Competitive Ability	High: Can adapt to a wide range of environmental conditions, including intermittent flows, degraded habitats, siltation, turbidity; they feed throughout the water column Low: Have thrived in southern and western states where introduced, do not appear to have spread much in WI, though distribution data is lacking
B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS	
1. Temperature:	Range: 15 - 25 deg. C
2. Spawning Temperature:	Range:
3. Number of Eggs:	Range:
4. Preferred Spawning Substrate:	Can broadcast eggs or attach them to rocks and vegetation
5. Hybridization Potential:	IN GA and TN, found to hybridize with blacktail shiners wherever they are both present; there is concern about their potentail to hybridize with other native shiners
6. Salinity Tolerance	Fresh: ☒ Marine: ☐ Brackish: ☐

7. Oxygen Regime	Range:
8. Water Hardness Tolerance	Range:
9. Easily confused for Native Species?	List: may be confused by some with native shiner species
C. DAMAGE POTENTIAL	
1. Likelihood of Damage	a. Presence of Natural Enemies:
	b. How well introductory and expansion pathways can be described and quantified: Introduced outside of native range initially when used as bait and more recently through aquarium trade; initial introduction is often followed by species' rapid multiplication, dispersal, and colonization
2. Environmental Impacts	a. Alteration of ecosystem composition, structure and function: feed throughout the water column on crustaceans and insects
	c. Damage to ecosystem resilience/sustainability: concern that, if they displace/replace native shiners that are a critical part of native mussel reproductive cycles, mussel populations could be impacted
	d. Loss of biological diversity: fear that they may hybridize with native shiners, contaminating gene pools or reducing reproductive success
	e. Abiotic modifications (affects on turbidity, H2O chemistry, etc.):
	f. Biotic effects on other species (loss of cover, nesting sites, forage, changing competitive relationships: their presence may impact the distribution of native fish
D. NET SOCIO/ECONOMIC IMPACT	
1. Positive aspects of the species to the economy/society:	Effect: can be used as bait and in aquaria (have been marketed in pet stores under the name "rainbow dance")
2. Direct and indirect effects of the invasive species:	Effect:
3. Type of damage caused by organism:	Effect:
Industries affected by invasive:	Effect:
4. Loss of aesthetic value affecting recreation and tourism:	Effect:
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:	Efforts targeting bait and aquaria industries have the potential for success, as these appear to be the primary mechanisms for further spread.
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:	
8. Threshold at which control would be attempted:	
9 Efficacy of Monitoring:	