NAME OF SPECIES: Chinese mitten crab (Eriocheir sinensis)

A. CURRENT STATUS AND DISTRIBUTION	
1. In Wisconsin?	a. YES ☐ NO ☒
	b. Abundance: n/a
	c. Geographic Range: n/a
	d. Type of Waters Invaded (rivers, ponds, lakes, etc): (in other locations) rivers, estuaries, lakes, wetlands
	e. Historical Status and Rate of Spread in Wisconsin: n/a
2. Invasive in Similar Climate Zones	YES ☒ NO ☐ Where: China, as far north as 40 deg. latitude, throughout Europe
3. Similar Habitat Invaded Elsewhere	YES ☐ NO ☒ Where:
4. In Surrounding States	YES ☐ NO ☒ Where: Reported in the Detroit River and Lake Erie without establishment
5. Competitive Ability	High: Low: in WI, adults could likely survive, but this speceis needs salt water to reproduce, so low/no threat of establishment
B. ESTABLISHMENT POTENTIAL AND LIFE HISTORY TRAITS	
1. Temperature:	Range: found in temperate climates around the world, can tolerate a wide range of temperatures. Native range in China from 26 deg. N to 40 deg. N
2. Spawning Temperature:	Range: Spawning on U.S. west coast occurs in late fall/winter; successful development at temperatures at/above 12 deg. C
3. Number of Eggs:	Range: females carry 250,000 to 1 million eggs
4. Preferred Spawning Substrate:	migrate downstream to reproduce in brackish waters of estuaries
5. Hybridization Potential:	none found
6. Salinity Tolerance	Fresh: ☒ Marine: ☒ Brackish: ☒
7. Oxygen Regime	Range: none found
8. Water Hardness Tolerance	Range: none found
9. Easily confused for Native Species?	List: none found

C. DAMAGE POTENTIAL	
1. Likelihood of Damage	a. Presence of Natural Enemies: white sturgeon, striped bass, bullfrogs, loons, and egrets have been reported to prey upon them. It's assumed that other predatory fishes, including largemouth bass and larger sunfishes, river otters, racoons, and other wading birds will eat them.
	b. How well introductory and expansion pathways can be described and quantified: A number of pathways exist: ballast water introduction, intentional introduction to establish them as a food source, planktonic larvae disperse to colonize new areas, adults can walk over land to invade neighboring rivers
2. Environmental Impacts	a. Alteration of ecosystem composition, structure and function: competiton with native species for food; predation can impact invertebrate communities
	c. Damage to ecosystem resilience/sustainability: these crabs are omnivorous and indiscriminate eaters with the ability to wipe out important food sources for other species
	d. Loss of biological diversity: possible loss of native species due to direct competition or predation
	e. Abiotic modifications (affects on turbidity, H2O chemistry, etc.): crabs burrow into banks, increasing bank erosion and reducing stability
	f. Biotic effects on other species (loss of cover, nesting sites, forage, changing competitive relationships: potential predation on salmonid and sturgeon eggs and juvenilles is of concern
D. NET SOCIO/ECONOMIC IMPACT	
1. Positive aspects of the species to the economy/society:	Effect: Considered a delicacy in Asia - $1.25 billion aquaculture industry in China. Also used for bait, fish meal, cosmetic production, and fertilizer
2. Direct and indirect effects of the invasive species:	Effect:
3. Type of damage caused by organism:	Effect: Impact commercial and recreational fishing - damage nets and other equipment and take bait; consumption of crops (rice); may block water intakes for irrigation and water supply,burrowing may compromise levees, etc.
Industries affected by invasive:	Effect: fishing, agriculture
4. Loss of aesthetic value affecting recreation and tourism:	Effect: increased bank erosin may have asthetic impacts
5. Increased cost to a sector (monitoring, inspection, control, public education, modifying practices, damage repair, lower yield, loss of export markets due to	Effect: very costly to fishing industry - can greatly impact shrip trawlers, with costs passed on to consumers

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: control very difficult due to abundance, ubiquity, high reproductive rate, and wide range of physiological tolerances,so prevention my be the only option. However, some mechanisms of spread impossible to control. Prevention cost unknown
7. Cost at different levels of invasion:	Effect: unknown
E. CONTROL AND PREVENTION POTENTIAL	
1. Costs of Prevention (including Education):	unknown
2. Responsiveness to Prevention Efforts:	unknown - maybe able to target people buying live crabs (or make live crabs illegal), but still need to deal with ballast water issues. Also, "natural" dispersal of established populations.
3. Detection Capability:	
4. Control Tactics Effective:	Mechanical: ☐ Biological: ☐ Chemical: ☐
5. Efficacy/Feasibility of Control (effort, # of staff):	physical (trapping) attempted in Europe without success; chemical treatment never a viable option; current research into fungi lethal to crabs as possible bio-control
6. Cost of Control:	High: ☐ Medium: ☐ Low: ☐
7. Non-Target Effects of Control:	n/a
8. Threshold at which control would be attempted:	n/a
9 Efficacy of Monitoring:	n/a