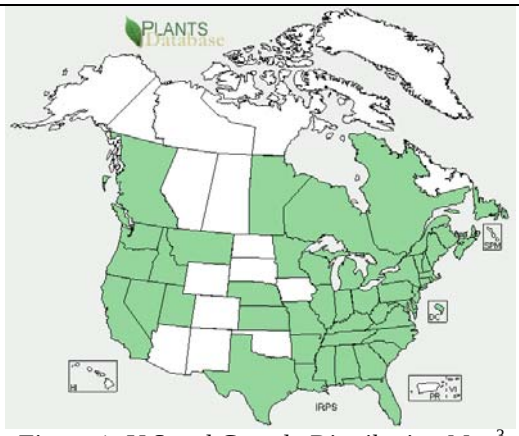
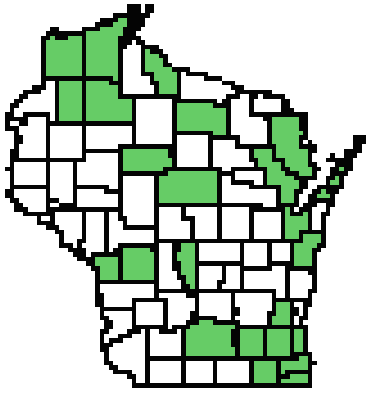
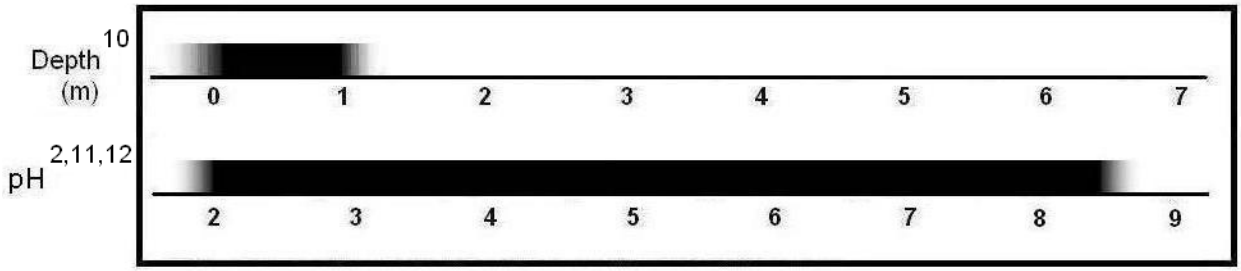
Aquatic Plant	Pale-yellow iris; Yellow iris; Yellow flag

I. Current Status and Distribution		***Iris pseudacorus***
a. Range	**Global/Continental**	**Wisconsin**
Native Range Europe, Mediterranean, Temperate Asia, Northern Africa[1,2]	 *Figure 1: U.S and Canada Distribution Map*[3]	 *Figure 2: WI Distribution Map*[4,5,6,7]
Abundance/Range Widespread: Locally Abundant: Sparse:	 Northeastern North America Western North America, Australia, New Zealand, South America[1] Undocumented	 Undocumented Scattered populations throughout Wisconsin Undocumented
Range Expansion Date Introduced: Rate of Spread:	 As early as 1771, Virginia[8,9] Rapid	 First recorded in 1938(4) Can be high
Density Risk of Monoculture: Facilitated By:	 Can form dense stands[9] Undocumented	 Can be high Undocumented
b. Habitat	Wetlands, marshes, swamps, rivers, streams, lakes, ponds, wet meadows, floodplain forests, fens, springs, ditches, irrigation canals, brackish waters, wet sand dunes, coastal shorelines[2,9]	
Tolerance	Chart of tolerances: Increasingly dark color indicates increasingly optimal range	
		
Preferences	Moist but not waterlogged habitats[9]; high nutrients[2,9,13]; silty, sandy, or rocky soil[14]	
c. Regulation		
Noxious/Regulated[3]:	CT, MA, MT, NH, OR, WA; VT[13]	
Minnesota Regulations:	*Regulated*; One may not introduce without a permit	
Michigan Regulations:	*Prohibited*; One may not knowingly possess or introduce	
Washington Regulations:	*Secondary Species of Concern*; Class C Noxious Weed	

II. Establishment Potential and Life History Traits	
a. Life History	Emergent perennial herbaceous wetland plant[13]
Fecundity	High
Reproduction	
Importance of Seeds:	Can produce hundreds of seeds per plant[2,10]
Vegetative:	Very important; reproduces vegetatively via rhizomes[2,9]
Hybridization	No hybrids recorded but several ornamental cultivars[2]
Overwintering	
Winter Tolerance:	High; can survive winter temperatures of up to -25°C in Europe[2]
Phenology:	Peak vegetative growth from April to June[2]; flowers from May to July[2,9]; fruits from July to November[2,9]
b. Establishment	
Climate	
Weather:	Temperate climates[9,13]; 68°N to 28°S (2)
Wisconsin-Adapted:	Yes
Climate Change:	Rhizomes are tolerant of considerable drought[2]; environmental disturbances such as hurricanes may effect establishment and dominance[15]
Taxonomic Similarity	
Wisconsin Natives:	High; *Iris* spp.
Other US Exotics:	High; *Iris* spp.
Competition	
Natural Predators:	Fallow deer (*Dama dama*)[2]; several insect species[2,16,17]
Natural Pathogens:	*Pseudomonas iridis* (pale-yellow iris root rot)[2]; *Puccinia iridis* (rust)[18]; several species of fungi[2,19]
Competitive Strategy:	Can tolerate waters with very low levels of oxygen[2,20,21]
Known Interactions:	Undocumented
Reproduction	
Rate of Spread:	At about 10 years of age, rhizomes fragment and contribute to new plant establishment[2,9]
Adaptive Strategies:	Undocumented
Timeframe	Undocumented
c. Dispersal	
Intentional:	Ornamental[1,2,22]
Unintentional:	Wind/water currents[9,23]; escape from cultivation[9,22]; flooding[9,22]
Propagule Pressure:	High; fragments relatively easily accidentally introduced

Figure 3: Courtesy of Jeff McMillian, USDA-NRCS PLANTS Database[24]
Figure 4: Courtesy of J.S. Peterson, USDA-NRCS PLANTS Database[25]

III. Damage Potential	
a. Ecosystem Impacts	
Composition	Dense stands may displace native vegetation and animals[9,13,26,27]
Structure	Can create extensive mats floating over deeper water[9]; may reduce habitat needed by waterfowl and fish[9]; plants may reduce stream width by trapping sediment[9]
Function	May alter historical patterns of plant succession[9,13]
Allelopathic Effects	Undocumented
Keystone Species	Undocumented
Ecosystem Engineer	Yes[15]
Sustainability	Undocumented
Biodiversity	Undocumented
Biotic Effects	Undocumented
Abiotic Effects	Undocumented
Benefits	Attracts hummingbirds and butterflies[28], although generally of little value to wildlife or livestock[9]
b. Socio-Economic Effects	
Benefits	Ornamental trade[1,2,22]; wastewater remediation and heavy metal removal[29,30,31,32,33,34,35]; provides erosion control[9,13]
Caveats	Risk of release and population expansion may outweigh benefits of use
Impacts of Restriction	Increase in monitoring, education, and research costs
Negatives	May clog streams and irrigation systems[10,14]; considered poisonous and unpalatable to livestock[9]
Expectations	Undocumented
Cost of Impacts	Decreased recreational value; decline in ecological integrity; increased research expenses
"Eradication" Cost	Undocumented
IV. Control and Prevention	
a. Detection	
Crypsis:	When not flowering, other *Iris*, *Sparganium*, *Typha* and *Acorus* spp.[14]
Benefits of Early Response:	Controlling small populations before extensive rhizomes are produced is very important[13]
b. Control	
Management Goal 1	Control
Tool:	Physical/mechanical removal[9,13,14]
Caveat:	Time and labor intensive[13]; may cause extensive sediment disturbance[9,13]; resins in leaves and rhizomes can cause skin irritation[14]
Cost:	Undocumented
Efficacy, Time Frame:	Only feasible for small isolated populations; entire plant and rhizome system must be removed[9,13,14]
Tool:	Mowing/cutting of aboveground foliage[5,12]
Caveat:	Labor intensive; does not remove below ground rhizomes
Cost:	Undocumented
Efficacy, Time Frame:	May eventually kill plant; many repeated attempts necessary; best to remove before seed pods are developed

Tool:	Herbicides[2,12] (glyphosate, imazapyr)[13,14]
Caveat:	Negative effects on non-target organisms
Cost:	Undocumented
Efficacy, Time Frame:	May be most effective during the growing season where herbicide is transported into the rhizome; integrated management of cutting and herbicide application may be effective[13]

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