

# Updating Wisconsin's Aquatic Invasive Species Management Plan

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UWEX Environmental Resources Center

Wisconsin Sea Grant

Wisconsin DNR



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HITCHHIKERS!**

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# Why Now?

- Things have changes
  - Pathways
  - Partners
  - Prevention programs
  - Technologies
    - See tackle boxes
- Guidance

**1995**

**Amazon.com** started selling each and everything online, and along with that Jeff Bezos starts first commercial-free 24 hour, internet-only radio stations. Then Radio HK and NetRadio start broadcasting. Companies like **Dell** and **Cisco** started using Internet in all their transactions. Online auction started by **eBay**.

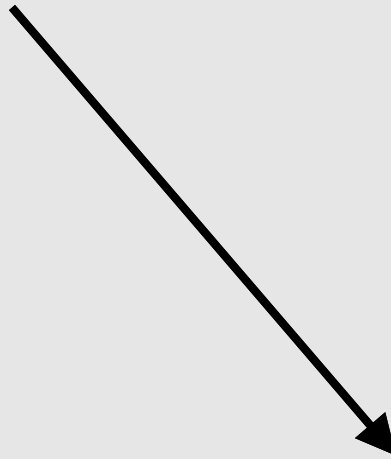
The image shows two side-by-side screenshots of early e-commerce websites. On the left is the Amazon.com homepage from 1995, featuring a blue header with the Amazon logo and text like 'Welcome to Amazon.com Books!' and 'One million titles, constantly low prices.' On the right is the eBay website, showing the 'eBay' logo in its characteristic multi-colored font and a search bar.



# Noticeably absent from the last plan



Creating a program



Improving a program

# Our approach

- Core Team
- Series of meetings to define structure
- Meetings with content experts to develop pathway information

# Our approach

Strategic Plan Meeting #1 12/11/14  
Room 223 UW-Stevens Point University Center  
Planning for the Plan, Notable Plans, SWOC  
\*Holiday Attire/Ugly Holiday Sweaters Encouraged\*

09:30 – Welcome, Introductions

09:45 – An Overview of AIS in Wisconsin from 2003 to now

10:15 – Process for moving forward; expectations and assignments for the core team

10:45 – Review the 2003 Wisconsin AIS Management Plan

- What do we like? What elements can we keep? What isn't useful to us?

11:45 – Lunch

12:45 – Review Michigan, Minnesota, Lake Superior, Wisconsin Invasive Species Council Plans

- What do we like? What elements would be useful to us?

02:00 – Break

02:15 – Group SWOC Analysis

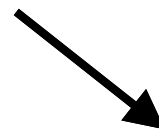
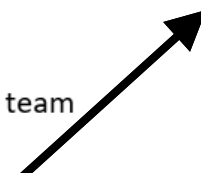
- Each core team member will bring strengths/weaknesses/opportunities/challenges to the meeting that will be compiled during this exercise
- Outline common themes and identify future opportunities and needs

04:15 – Wrap up, award best (which could also be the worst) holiday attire

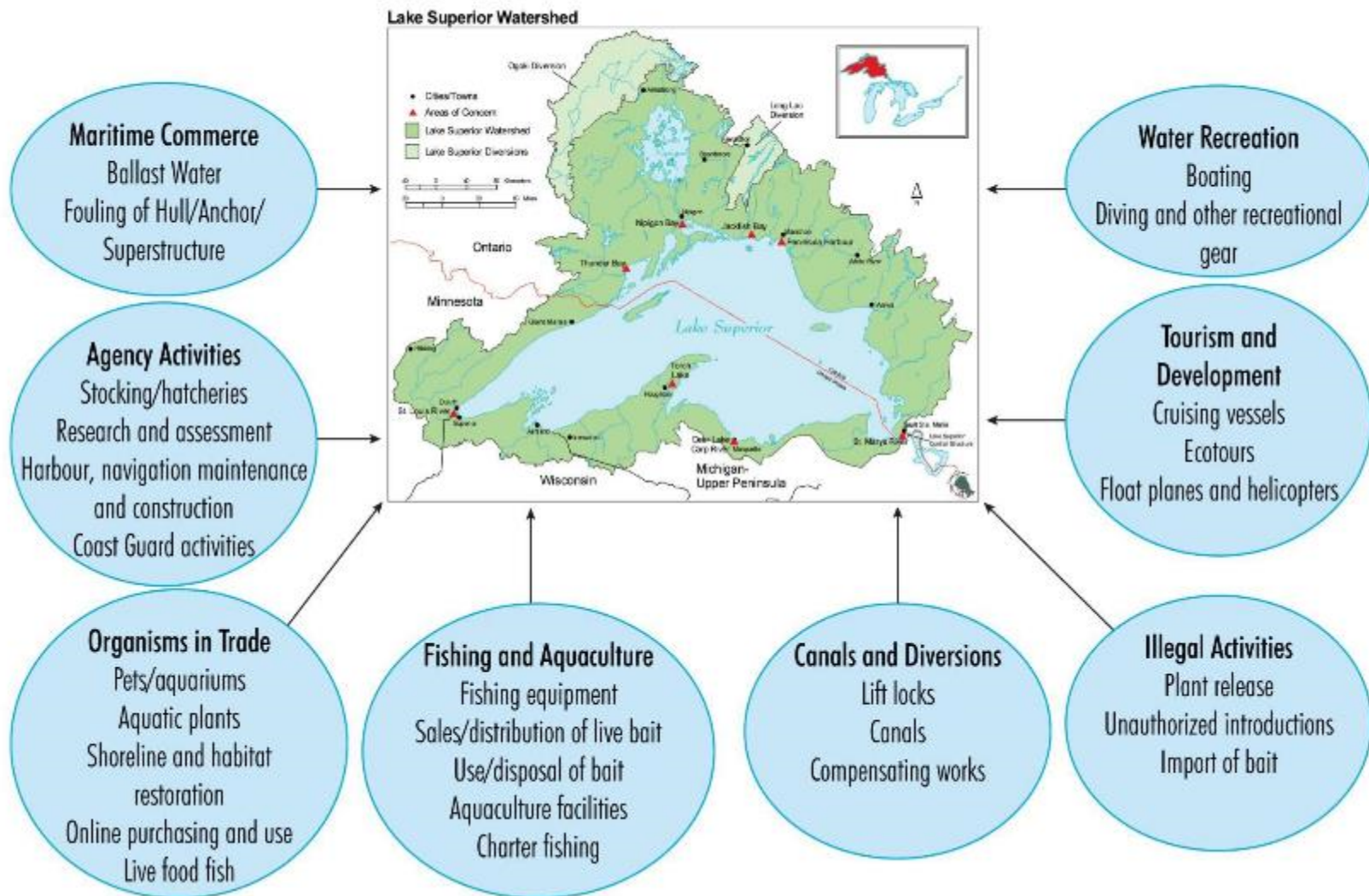
04:30 – adjourn

Goals & Species

Pathways



## Aquatic Invasive Species in Lake Superior: Vectors and Pathways Concept Map



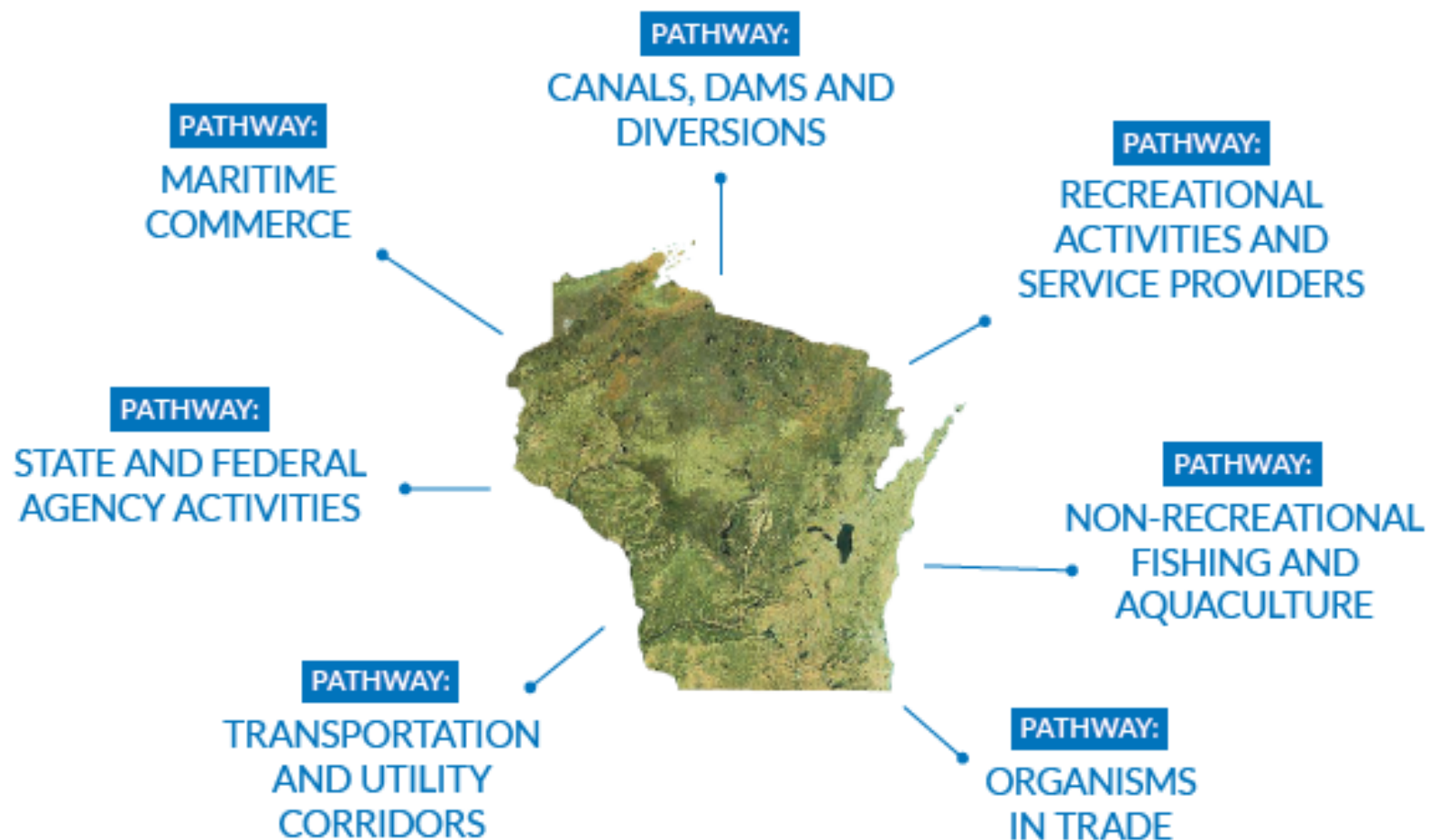
# Michigan AIS Management Plan

IX. Goals 1 and 2: Prevent new AIS introductions and limit the dispersal of AIS via OIT								
Objective	Strategic Action	Measure of Success	Target Date	Lead State Agency	Cooperating Agency or Organizations	Estimated State Cost	Status in Michigan	
IX.A. Prevent introductions and limit the dispersal of AIS through implementation of existing legislation, regulation, and permitting processes pertaining to OIT.	IX.A.1. Implement current laws and regulations through MDEQ, MDNR, and MDARD staff training on identification of AIS and statute requirements.	Percentage of relevant staff trained. Goal is 100%.	2014; update training every 3 years	LED, FD, and MDARD	-	Some training funded through existing programs.	Ongoing but inconsistent efforts	
	IX.A.2. Identify regulated industries and maintain contact lists of businesses involved in trade of aquatic organisms.	Contact lists current (yes/no).	2014; review and update annually	MDARD, FD, WLD, and LED	Industry	AIS Core Team <sup>7</sup> . Project funding from GLRI grant at a one-time allocation of \$162,230.	Ongoing but inconsistent effort depending on industry type	
	IX.A.3. Implement current laws and regulations through compliance inspection and enforcement at businesses and private sales, and through transportation routes.	Number of inspections and compliance rates. Goal is 100% compliance. Create briefing that identifies the need for new efforts (e.g., internet sales) and contains recommendations on implementation of new inspections. Number of recommendations implemented.	Inspections - annually; Briefing - 2014; Number of recommendations implemented - annually	Report - 2013; Review and update list - annually	MDARD and LED	USDA and industry	Additional inspection efforts currently funded through the AIS Core Team supplementary \$133,500 from short-term federal grant for special projects.	Ongoing but inconsistent effort depending on industry type
	IX.A.4. Evaluate existing state laws and regulations and the utilization of a risk assessment process to identify new AIS threats. Make changes to the state prohibited/restricted species list as appropriate.	Create report containing recommendations on the need for new laws/regulations (e.g., mobile aquaculture) and the use of risk assessment. Percentage of time risk assessment process used to identify and add new species to state prohibited and restricted species lists; goal is 100%.	Evaluate discrepancies and present recommendations in a written briefing. Number of recommendations implemented.	2013; review annually	MDARD, FD, and WLD	Michigan AIS Advisory Council, federal agencies, other state agencies and provinces, Tribes, local governments, NGOs, academia, regulated community, industry, etc.	AIS Core Team. Additional funds estimated at \$142,230/year to create report and evaluate species, develop and distribute materials, and to initiate new accreditation program. Additional funds may be needed to print materials.	No current focused efforts
	IX.A.5. Evaluate the discrepancies between state, provincial, and federal regulated AIS lists and modify Michigan list as appropriate.	Track and provide timely comments on federal legislation, in particular, the Lacey Act and new OIT legislation.	As needed	FD and WLD	Federal agencies (e.g., USFWS), other Great Lakes states		No current focused efforts	
	IX.A.6. Promote protective federal legislation.	Identify target industry audiences, identify available informational materials, and develop new materials if needed. Conduct AIS identification workshops and distribute informational material. Write articles for major trade journals. Number of events, articles, and materials distributed.	Identify and develop materials - 2015; Report #s - annually	MDARD and MDNR	Michigan AIS Advisory Council, federal agencies, other state agencies, Sea Grant, and industry		No current focused efforts	
IX.B. Prevent introductions and limit the dispersal of AIS by providing AIS information and education to the OIT industry and consumers.	IX.B.1. Implement/support industry awareness campaigns promoting the responsible acquisition, distribution, and disposal of aquatic OIT.	Identify target audiences, identify available informational materials, and develop new materials. Distribute information through conventional and social media. Number of outreach activities.	Identify and develop materials - 2015; report annually	MDARD and MDNR	Michigan AIS Advisory Council, federal agencies, other state agencies, and industry		Limited/ inconsistent efforts	
	IX.B.2. Implement/support consumer awareness campaign promoting proper disposal of aquatic OIT (e.g., HabitatAttitude).	Identify target audiences, identify available informational materials, and develop new materials if needed. Distribute informational material through conventional and social media. Number of outreach activities.	Identify and develop materials - 2015; Report #s - annually	MDARD and MDNR	Michigan AIS Advisory Council, federal agencies, other state agencies, and industry		No current efforts	
	IX.B.3. Develop and implement campaign to enhance consumer awareness and proper disposal of regulated AIS.							

<sup>7</sup> Many of these strategic actions are currently being addressed through the existing State of Michigan AIS Core Team coordinated by the WRD, which currently has short-term funding through a GLRI grant at 5 or more FTEs (~\$750,000/year). The AIS Core Team consists of the MDEQ's WRD and OGL: MDNR's FD, WLD, LED, and PRD; MDARD; and MDOT.



## AQUATIC INVASION PATHWAYS:



# Recreational Activities & Service Providers

## PATHWAY: RECREATIONAL ACTIVITIES AND SERVICE PROVIDERS

Wisconsin's abundant high-quality water resources make it a popular place for water-based recreation for both residents and nonresidents, with Wisconsin selling the third highest number of out-of-state fishing licenses in the nation. All types of water-based recreation, including boating, fishing, diving, snorkeling, rafting/tubing, wildlife watching, hunting and other activities, occur in Wisconsin. The travel and tourism associated with these activities is a boon to the Wisconsin economy, and these water-based recreational activities are part of life in Wisconsin.



Unfortunately, any activity that involves traveling between different waterbodies presents some risk of transporting AIS. Any gear or equipment used on the water may become fouled with

AIS or material that contains AIS, and using that gear or equipment on a different waterbody could introduce those AIS.

Recreational boating is known to be a common, if not the most common, secondary invasion pathway for AIS in the United States (Johnson et al. 2001). It helped spread Eurasian watermilfoil across the United States (Smith and Barko 1990), and more recently, it has facilitated the spread of Dreissenid mussels to the western United States (Hickey 2010). The State of Wisconsin has done numerous things to help address this pathway. Wisconsin's primary tool is NR 40, an invasive species rule that made it illegal to transport aquatic vegetation and bilge and live well water on public roadways. Additionally, the CBCW program, which began as a small volunteer program in 2002, is now a statewide boater education program that consists of hundreds of volunteers and paid staff that educate boaters on AIS prevention steps and inspect more than 100,000 boats each year.

Wisconsin has invested heavily in outreach to recreational boaters. The WDNR has streamlined grant funding available for local entities interested in implementing CBCW programs; more than \$400,000 was awarded for CBCW activities by the WDNR in 2015. AIS education grants are available to fund local AIS coordinators who train and coordinate CBCW

See Table 4 on page 41

volunteers. Data collected from CBCW inspections indicate that 95% of boaters are aware of the actions they need to take to prevent the spread of AIS.

However, given the diversity of recreational activities, it has been difficult to reach all segments of the recreational activity pathway. Regulations and CBCW have been effective tools for reaching the core of the boating population, but more specific segments of that population, such as transient boaters (Witzling et al. 2016) or specialty watercraft operators (Campbell et al. 2016), may pose a greater risk and need additional outreach to implement sustainable behaviors. Other segments of the recreational activity pathways may not use boats (e.g., wading anglers) or use them in ways that aren't easily addressed by the standard CBCW program (e.g., fur harvesting, waterfowl hunting). While these sub-pathways may not be as large as the general recreational boating pathway, reaching these audiences is important to further reduce the risk of invasions into Wisconsin.

Another audience in this pathway consists of the businesses that support these activities – marinas, lake and dock service providers, aquatic plant harvesters, chemical applicators and other related companies. These are all businesses that either use watercraft in similar ways to recreational users or service recreational watercraft.

Little AIS outreach has been directed toward this stakeholder group, and future efforts should engage this influential water user group. The group includes important opinion leaders for water-based recreation whose support is critical to the success of any AIS management strategy. Many stakeholders in this group also have the potential to exhibit some high-risk behaviors, including using multiple waterbodies in a single day.



# Recreational Activities & Service Providers

**TABLE 4 – RECREATIONAL ACTIVITIES AND SERVICE PROVIDERS**

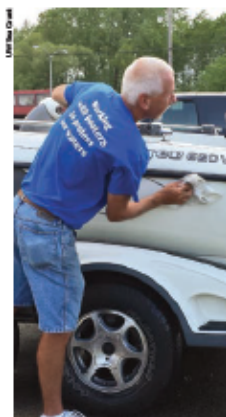
Goals 1 & 2 Pathways Approach:  
Prevent new invasions and stop secondary spread in Wisconsin through recreational activities and service providers

SEE RECREATIONAL ACTIVITIES AND SERVICE PROVIDERS PATHWAY ON PAGE 16

Subpathway	Strategy	Specific Actions	Lead Organization	Cooperating Organizations
Recreational Boating	Education/ Outreach	Continue to inspect more than 100,000 watercraft/year through the Clean Boats Clean Waters (CBCW) program	UWEX/WDNR	WI AIS Partnership
		Implement a mobile CBCW data collection and entry system by 2020	UWEX/WDNR	WI AIS Partnership
		Create a registry and certification for CBCW inspectors by 2020	UWEX/WDNR	WI AIS Partnership
		Include the boater observation study as a component of CBCW statewide in 2019	UWEX/WDNR	WI AIS Partnership
		Develop new outreach materials to address boating pathways that may require additional actions to reduce risk (e.g., wakeboard boats, personal watercraft)	UWEX/WDNR	WI AIS Partnership
		Evaluate outreach efforts annually and modify when necessary	UWEX/WDNR	WI AIS Partnership
		Continue coordination of statewide outreach campaigns that target recreational boaters (e.g., Landing Blitz, Drain Campaign)	UWEX/WDNR	WI AIS Partnership
		Develop continuing education opportunities for CBCW volunteers that increase their capacity to educate boaters	UWEX	WI AIS Partnership
		Better target transient boaters and boaters from out of state	UWEX/WDNR	WI AIS Partnership
	Agency Collaboration	Develop a statewide set of core services for the Wisconsin AIS Prevention Network funded by WDNR contracts	WDNR	WI AIS Partnership
		Develop a watercraft decontamination strategy for Wisconsin boaters and communicate the strategy with partners	UWEX/WDNR	WI AIS Partnership
		Communicate across LE, CBCW, and AIS partners for more strategic outreach	UWEX/WDNR	WI AIS Partnership
	Research	Determine risk and appropriate actions to reduce AIS transport risk of less common recreational watercraft (e.g., wakeboard boats, personal watercraft)	UWEX/WISG	WI AIS Partnership
		Continue with CBCW data collection techniques that allow for statistically valid evaluations of boater actions	UWEX	WI AIS Partnership

(continued)

# Program snapshot & reference point

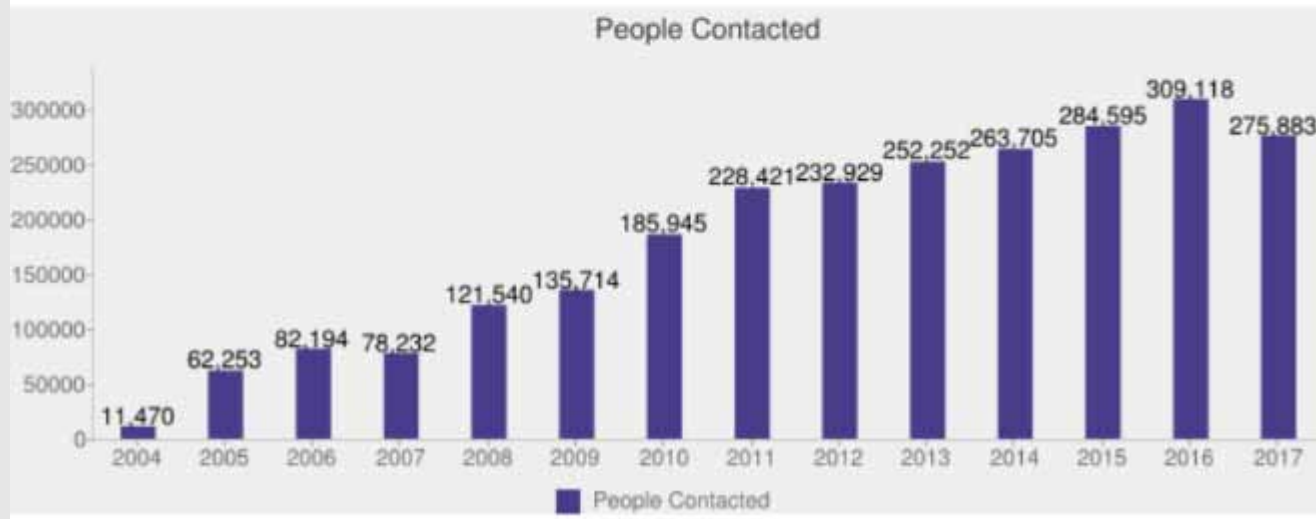
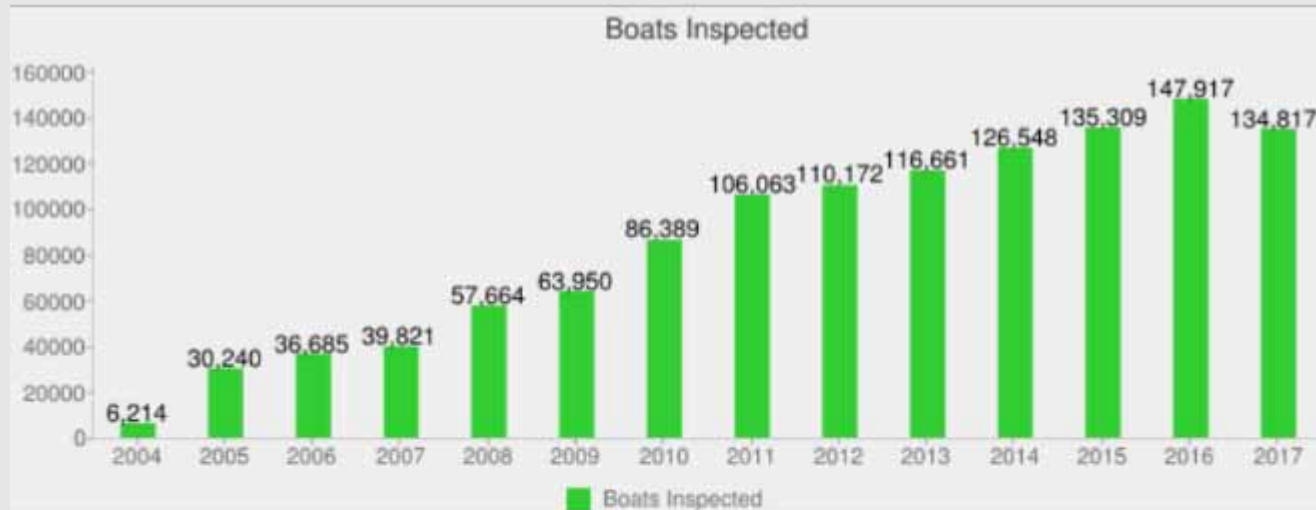


## CONTENTS

<b>Executive Summary</b> .....	<b>3-4</b>
<b>Introduction</b> .....	<b>5-11</b>
BACKGROUND .....	5
PURPOSE .....	6
REGIONAL TIMELINE .....	7
GEOGRAPHIC SCOPE .....	9
DRAFTING THE WISCONSIN AIS MANAGEMENT PLAN UPDATE REVIEW AND APPROVAL .....	10
GOALS .....	11
<b>Problem Definition and Ranking</b> .....	<b>12-21</b>
OVERALL PERSPECTIVE AND PROBLEM RANKING .....	12
SPECIES OF CONCERN – REGULATED SPECIES PATHWAYS APPROACH .....	13
PATHWAY: MARITIME COMMERCE .....	14
PATHWAY: CANALS, DAMS AND DIVERSIONS .....	15
PATHWAY: RECREATIONAL ACTIVITIES AND SERVICE PROVIDERS .....	16
PATHWAY: NON-RECREATIONAL FISHING AND AQUACULTURE .....	17
PATHWAY: STATE AND FEDERAL AGENCY ACTIVITIES .....	18
PATHWAY: TRANSPORTATION AND UTILITY CORRIDORS .....	19
PATHWAY: ORGANISMS IN TRADE .....	20
<b>Management Activities that Support the Pathways Approach</b> .....	<b>22-23</b>
MONITORING .....	22
RESPONSE ACTIONS .....	23
<b>Control – Definition and Current Status</b> .....	<b>24</b>
<b>Appendices/Tables</b> .....	<b>25-51</b>
APPENDIX 1 – EXISTING AUTHORITIES AND PROGRAMS .....	25-31
APPENDIX 2 – TIMELINE OF REVIEWS AND APPROVALS .....	32
APPENDIX 3 – PROGRAM EVALUATION .....	32
APPENDIX 4 – WI AIS MANAGEMENT PLAN CORE TEAM .....	33
APPENDIX 5 – ACRONYMS .....	34
APPENDIX 6 – LITERATURE CITED .....	35
APPENDIX 7 – DOCUMENTATION AVAILABLE ONLINE .....	36
TABLE 1 – MANAGING EXISTING POPULATIONS .....	37
TABLE 2 – MARITIME COMMERCE .....	38-39
TABLE 3 – CANALS, DAMS AND DIVERSIONS .....	40
TABLE 4 – RECREATIONAL ACTIVITIES AND SERVICE PROVIDERS .....	41-43
TABLE 5 – NON-RECREATIONAL FISHING AND AQUACULTURE .....	44-45
TABLE 6 – STATE AND FEDERAL AGENCY ACTIVITIES .....	46
TABLE 7 – TRANSPORTATION & UTILITY CORRIDORS .....	47-48
TABLE 8 – ORGANISMS IN TRADE .....	49-50
TABLE 9 – RAPID RESPONSE .....	51

# Some highlights

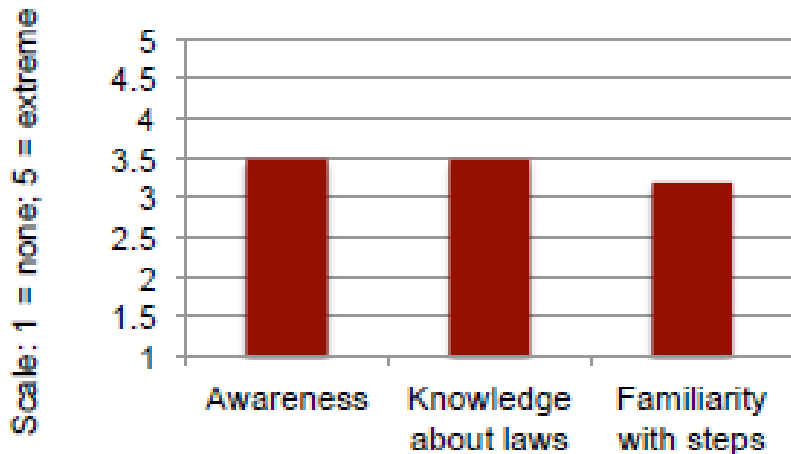
We're really good at reaching recreational boaters with SAH!



We're really good at reaching recreational boaters with SAH!



Respondents Self-Report AIS Awareness & Knowledge

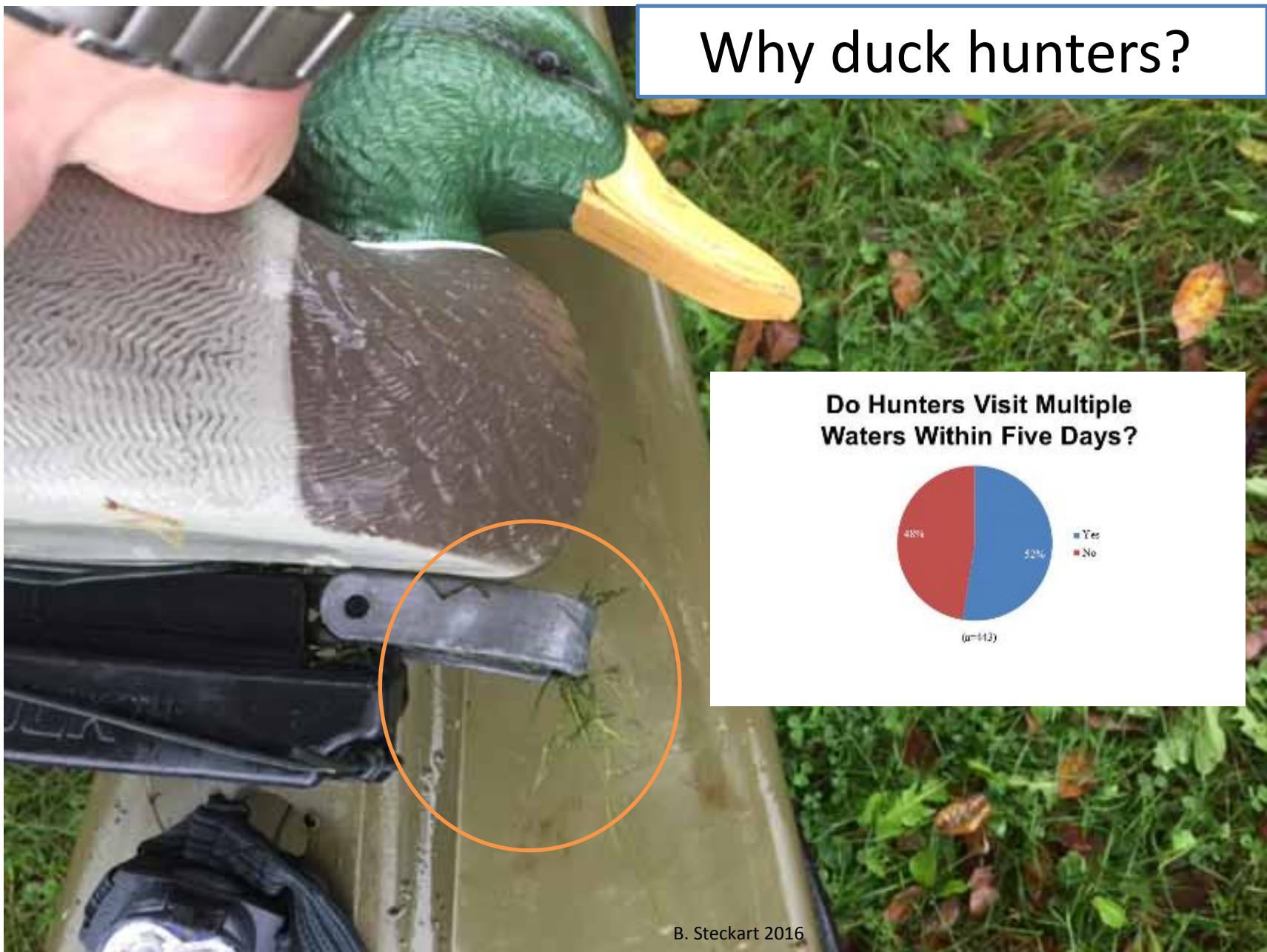


### Compliance Better than 2009

In 2009, a random sample of Wisconsin boaters and anglers were surveyed with many of the same questions as in 2013. In 2009, the survey was administered via telephone rather than by mail as it was in 2013. Overall, compliance has increased since 2009. Below are the mean responses to compliance items for both years, listed from best to worst. A 1 means *never*, and 5 means *always*. Depending on question wording, either a 1 or 5 might indicate better compliance, so some items show the reverse coded score in parentheses for reference.

Use leftover live bait minnows on a different body of water?	2013	1.5 (4.5)
	2009	1.3 (4.7)
Drain water from the <u>boat</u> before leaving the landing?	2013	4.5
	2009	3.9
Remove plants and animals from the boat and equipment before leaving the landing?	2013	4.5
	2009	3.3
Transport your catch away from a waterbody using a livewell, bucket or other container filled with water?	2013	2.1 (3.9)
	2009	2.4 (3.6)
Drain water from the <u>livewell</u> before leaving the landing?	2013	4.3
	2009	3.2
Drain water from a bucket or other container holding your daily catch before leaving the water body?	2013	4.0
	2009	3.0
Add lake or river water to your minnow container?	2013	2.2 (3.8)
	2009	2.2 (3.8)
Drain water from the <u>motor</u> before leaving the landing?	2013	3.8
	2009	3.1
Put your catch on ice when you leave a water body?	2013	2.9
	2009	Not asked

# Why duck hunters?





**TABLE 6 – STATE AND FEDERAL AGENCY ACTIVITIES**

Goals 1 &amp; 2 Pathways Approach:

Prevent new invasions and stop secondary spread in Wisconsin through state and federal agency activities

SEE STATE AND FEDERAL AGENCIES PATHWAY ON PAGE 18

Subpathway	Strategy	Actions	Lead Organization	Cooperating Organizations
Agency Management Activities	Education/ Outreach	Train staff on decontamination procedures	WDNR	UWEX, WI AIS Partnership
	Agency Collaboration	Form a collaborative to improve and promote decontamination methods among monitoring staff across agencies	WDNR/UWEX	UWEX, WI AIS Partnership, state agencies
		Continue to work with regional entities to ensure that decontamination protocols are consistent across states	WDNR/UWEX	
	Research	Continue to refine decontamination and disinfection methods	WDNR	
Regs/ Enforcement	Regularly assess the compliance of staff with decontamination manual code	WDNR	Permitee/ contractor	
Law Enforcement	Education/ Outreach	Train law enforcement on decontamination procedures	WDNR	Local LE
	Agency Collaboration	Collaborate to improve and promote disinfection methods among monitoring staff and researchers	WDNR	UWEX, WI AIS Partnership, state agencies
	Research	Continue to refine decontamination and disinfection methods	WDNR	
Academic Researchers	Education/ Outreach	Train researchers on decontamination procedures	WDNR	UWEX, WISG
	Agency Collaboration	Promote the adoption of decontamination BMPs throughout universities in Wisconsin	WDNR/ UW System	UWEX
		Collaborate to improve and promote disinfection methods among monitoring staff	UW System	WDNR
	Regs/ Enforcement	Continue to include decontamination requirements in scientific collector permits	WDNR	Universities

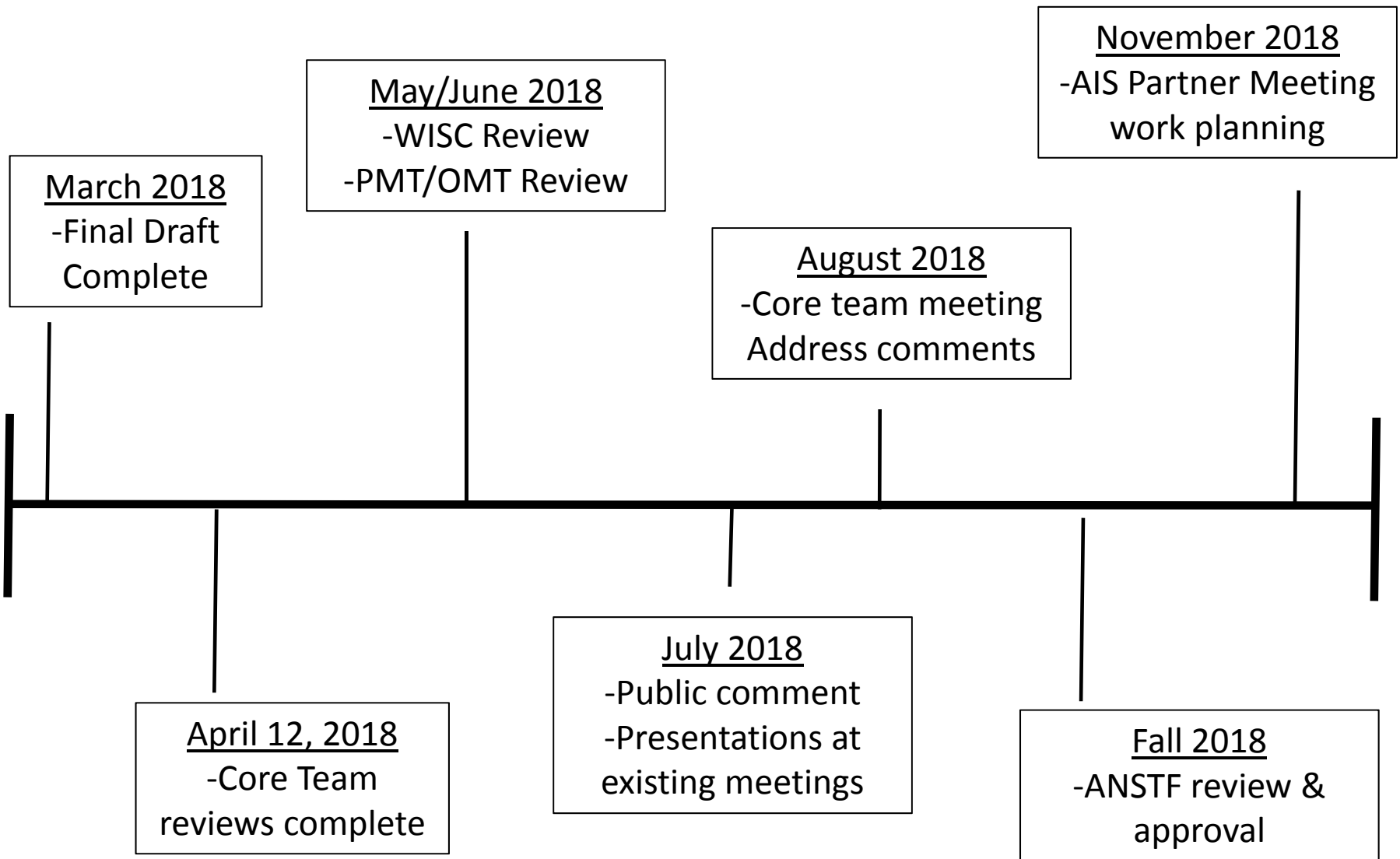


## AIS Disinfection Supplemental Training

Unlisted

163 views

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## WI AIS Plan Review Process

## How you can be involved

- Public review
  - 21 day comment period in July
- Want more time to review it?
  - Email [tim.campbell@wisc.edu](mailto:tim.campbell@wisc.edu)



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## WISCONSIN AQUATIC INVASIVE SPECIES

# Management Plan



### WISCONSIN GOALS:

- Prevent introduction of new species
- Contain the spread of existing species
- Control existing populations to minimize harmful impacts