

Sticky Habits: Insights into Behaviors by Recreational Boaters



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STOP AQUATIC HITCHHIKERS!™

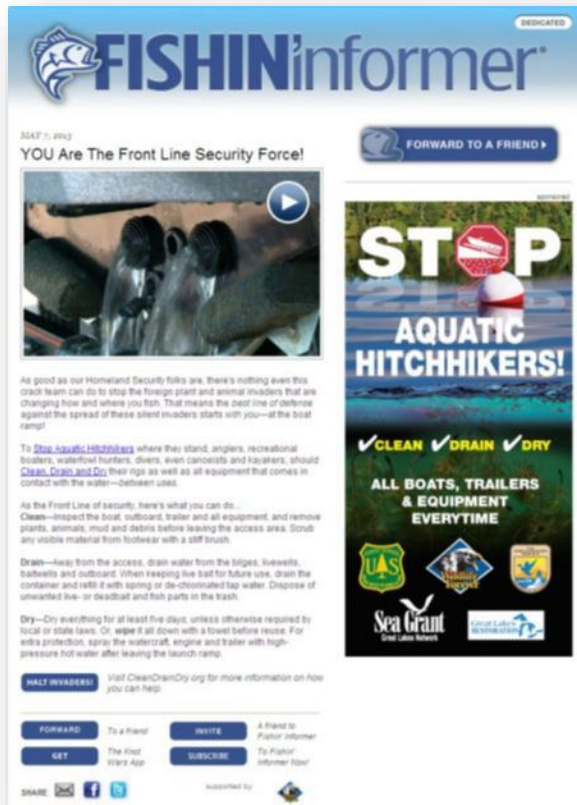
Prevent the transport of aquatic invasive species.
Clean all recreational equipment.

www.ProtectYourWaters.net

- National social marketing-based campaign
- Designed to link tools to barriers for behavior change
- Created to be 'stepped down' so partners can adapt or adopt resource materials
- 1,400 partners joined (business, agencies, academia, non-profits)
- Since 2006, campaign partners generated 2 B impressions

Great Lakes Angler Survey

Message Foci: Who, What, Where, When, How



April 30
Who



May 7
What



June 4
Survey

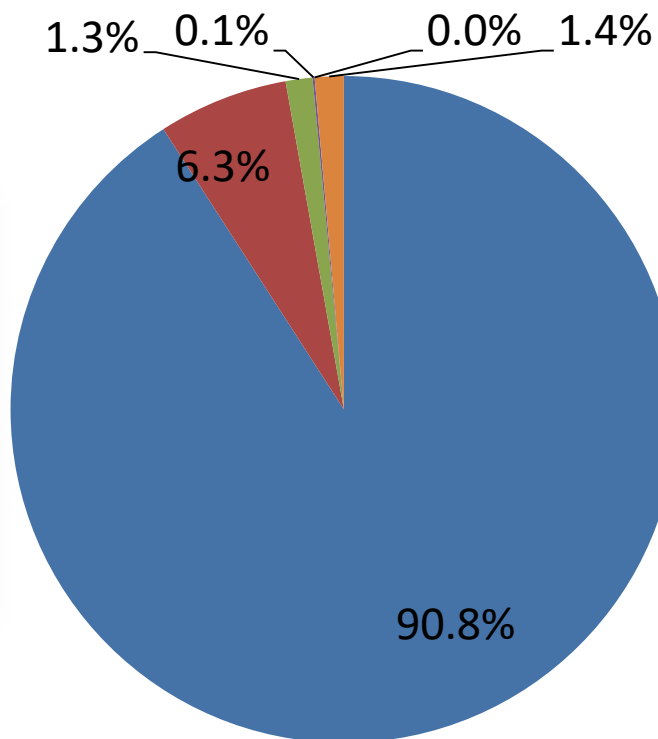
Acknowledge: Pat Conzemius, Wildlife Forever, and NA Media Group

Message Focus: Threats

***Avoid fear as it is a poor motivator**



'08 MN Billboard near I-Falls



**2013
Angler
Survey:
97%
perceive
AIS as a
threat in
the Great
Lakes**

■ Very Important
■ Moderately Important
■ Somewhat Important
■ Not Very Important
■ Not At All Important
■ Don't Know/Not Sure

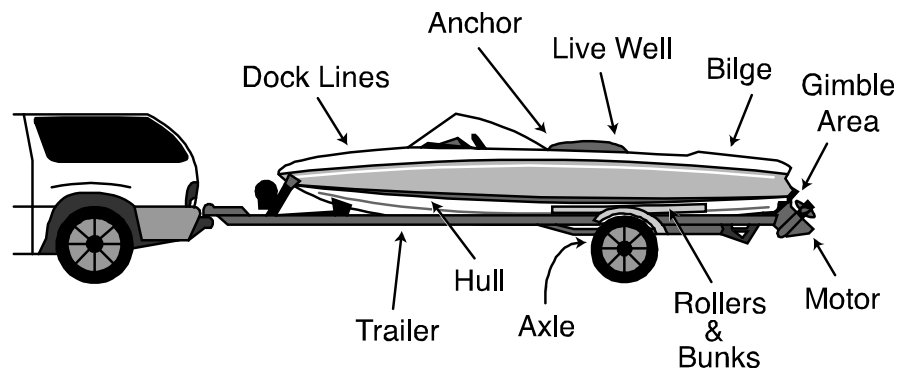
Base N = 2,013



Message Focus: How to Take Action for Motor Boaters



- ✓ **Clean** ✓ **Clean off** plants, animals and mud... *before leaving water access*
- ✓ **Drain** ✓ **Drain** water from boat, motor, bilge, and bladder tanks *away from water access*
 - ✓ **Rinse** watercraft, trailer, and equipment with high pressure hot water
 - ✓ **Flush** motor according to owner's manual
- ✓ **Dry** ✓ **Dry** everything for more than five days* **OR wipe** with a towel *before reuse*





E-Survey Comparison of Awareness Before & After Exposure

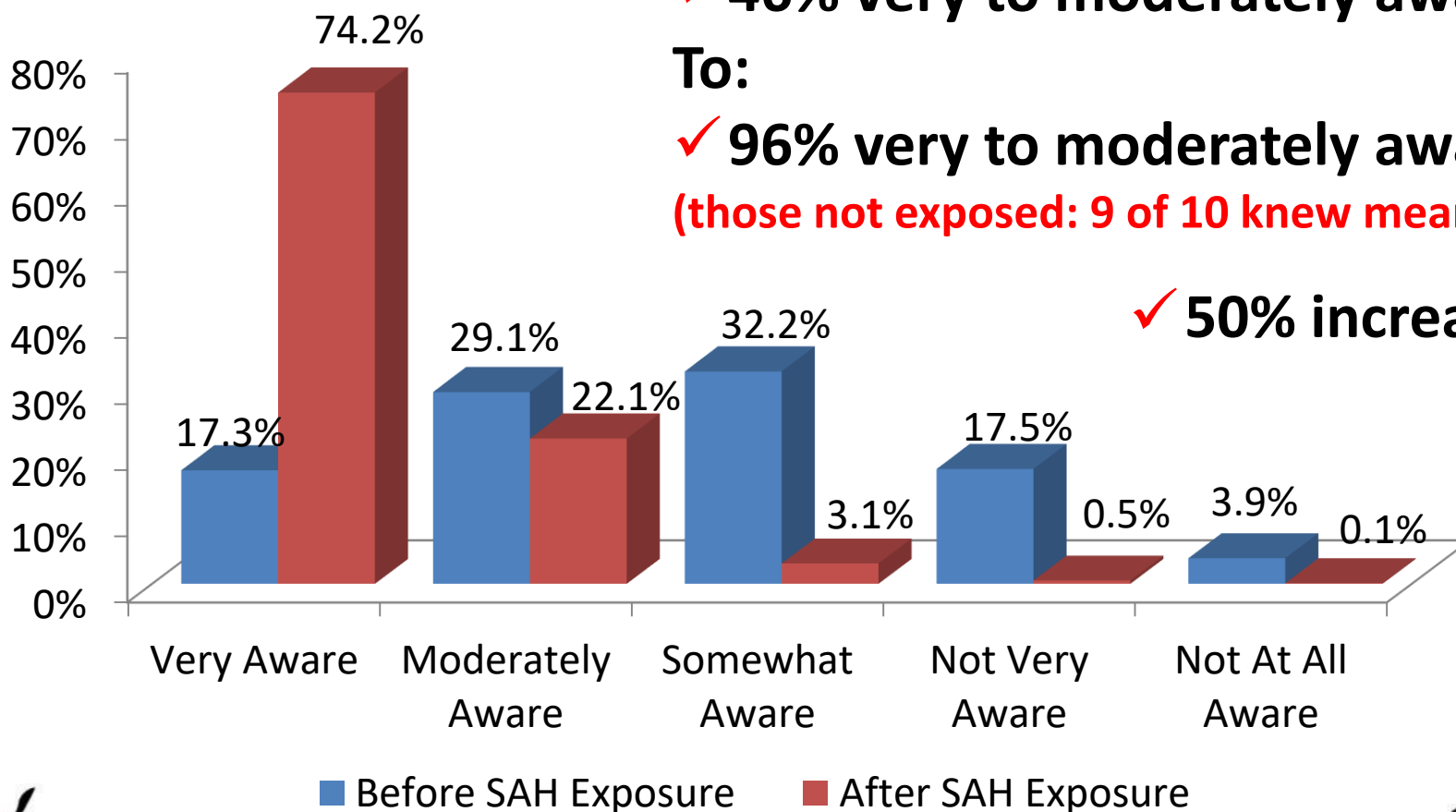
From:

✓ 46% very to moderately aware

To:

✓ 96% very to moderately aware
(those not exposed: 9 of 10 knew meaning)

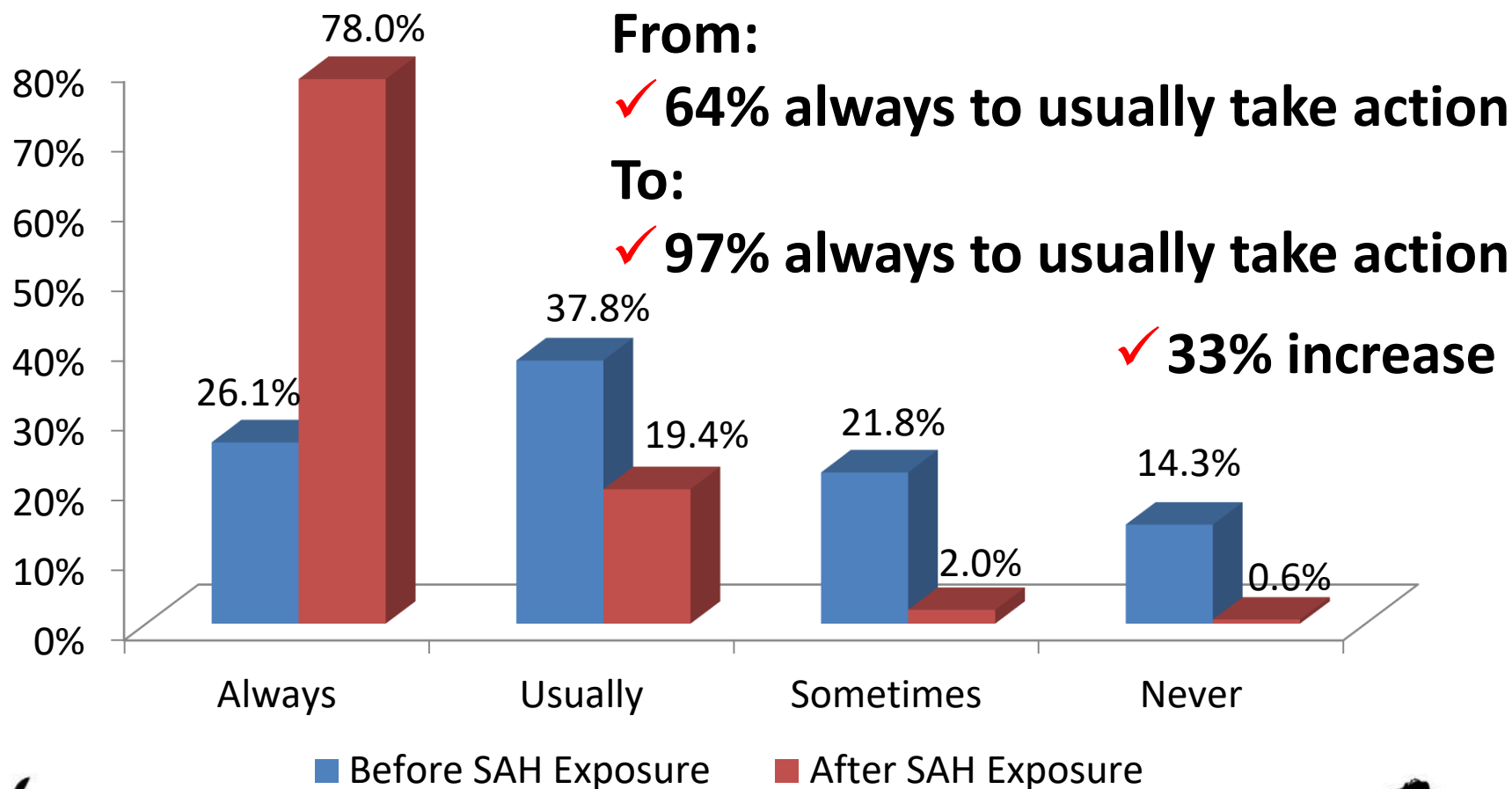
✓ 50% increase





**STOP AQUATIC
HITCHHIKERS!™**

E-Survey Comparison of Actions Taken Before & After Exposure





Kawishiwi Watershed Protection Project (KWPP)

- White Iron Chain of Lakes Association (WICOLA) joined SAH! in 2009
- Concerned over spread of AIS
- Partnered with MN Sea Grant, MN Pollution Control Agency, Lake County SWCD, Forest Service, others
- Little AIS outreach in NE Minnesota
- WICOLA embarked on 30 month project to extend SAH! at meetings, booths, and hosted a symposium
- Conducted 2012 mail survey of 2,200 households re: AIS issues (38% response rate)





Access Sign

Market Research

"Most Effective" AIS Information Sources	# of Responses	KWPP vs GLs % of Responses	
Water access signs	304	14.4	14.1
Newspapers or magazines	268	12.7	18.4
Television ads	243	11.5	10.7
Regulation booklets	241	11.4	4.0
Billboards	147	7.0	1.7
Radio ads	138	6.6	2.4
Brochures	120	5.4	2.7
Signs along shore	119	5.2	1.7
Bait shop	118	5.6	6.9
Web sites	117	5.3	7.9
Watercraft inspections	74	3.5	2.1
Newspaper ads	66	3.1	4.8
Displays at rest areas	52	2.5	0.9
Regulation cards	31	1.5	4.0
Highway radio messages	24	1.1	0.0
Kiosk at sporting goods stores	21	1.0	1.0
Stickers	19	0.9	0.6
Identification cards	10	0.5	2.7
Total	2,110	100%	

**Emphasize mass media:
newspapers, magazines, TV,
billboards, radio, signs**



Promote Results: Most Taking Actions



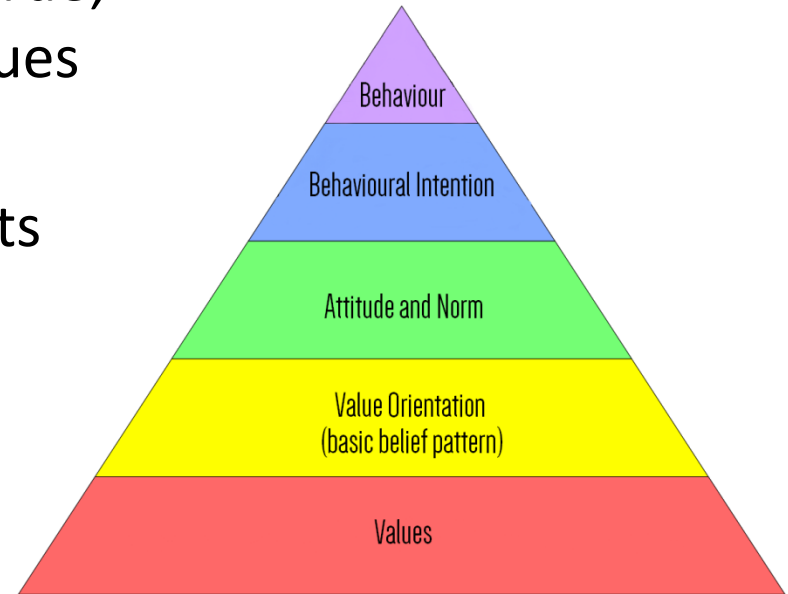
Ranking	Action Taken	KWPP vs GLs % "Always" or "Usually"
VH	Drain water from motor, bilge and live well	92.9 94.2
VH	Inspect and remove aquatic plants, animals and mud from watercraft, motor and trailer before leaving access	92.6 90.1
M	Dispose of unwanted live bait, worms and fish parts in the trash	81.9 88.4
M	Dry everything for at least 5 days before use	62.2 68.8
L	Rinse watercraft and equipment with garden hose	33.0 70.2
L	Wash watercraft with high pressure or hot water	11.4 45.0

Elements of Human Behavior

- Human **values** regarding the environment and society are influenced by changes in attitudes, beliefs and changes in perspective over time
- **Beliefs** and **attitudes** can change based on the situation, awareness, ascribed responsibility, expectancy of control, skill and image of themselves
- **Beliefs** and **attitudes** can be influenced by exposure perceived or real
- **Personal** and **social norms** influence behaviors
- **Injunctive norms** compared to **descriptive norms** influence human behavior

General Constructs of Human Behavior

- **Values:** Belief pertaining to desirable end states that guides selection or evaluation of behavior, people and events
- **Beliefs (B):** Psychological state that person holds a proposition or premise to true; beliefs modulate interaction of values and attitudes
- **Attitudes:** Construct that represents an individual's like or dislike toward an object, subject, behavior or event that is composed of various forms of judgment



Types of Norms

- ***Injunctive norms (IN)***: Behaviors generally approved of by other people
- ***Descriptive norms (DN)***: Perceptions of how most people behave
- ***Personal norms (PN)***: Rules that individuals use to determine and evaluate appropriate and inappropriate values, beliefs, attitudes and behaviors based on widely accepted practice
- ***Social norms (SN)***: Rules that groups use to determine and evaluate appropriate and inappropriate values, beliefs, attitudes and behaviors based on widely accepted practice

Types of Values

- ***Altruism (A)***: Value-based motivation to act in ways that benefit another at some net cost to self
- ***Biospheric (Bi)***: Value-based attitude focused on well-being of living things such as plants, animals, and trees
- ***Conservatism (C)***: Value-based attitude on traditional practices such as devoutness, tradition, and stability
- ***Egoistic (E)***: Value-based attitude focused on self such as health, quality of life, prosperity, and convenience
- ***Self-enhancement (SE)***: Value-based life goal that includes social power, authority, wealth, and self-promotion
- ***Social altruism (SA)***: Value-based attitude focused on family, community, and human environment



Survey Results: Values and Norms



Likely Values Addressed	Reasons Based on:	KWPP vs GLs % Very to Somewhat Effective
SA/Bi/C	A desire to keep AIS out of our lakes and rivers	92.7 98.6
A/B/C	The feeling of personal responsibility; my actions make a difference	91.1 97.9
A/E/SE	The desire to prevent damage to my boat, equipment or personal property	66.0 92.9

- ✓ Tap into values by demonstrating through words and images that AIS damage the environment, recreation, and economies of communities that depend upon healthy lakes and rivers.
- ✓ Use words like outdoor traditions, heritage, and protecting our waters for future generations.

A = altruism
 B = beliefs
 Bi = biospheric
 C = conservatism
 DN = descriptive norms
 E = egoistic
 IN = injunctive norms
 PN = personal norms
 SE = self-enhancement
 SA = social altruism
 SN = social norms



Survey Results: Values and Norms



Values	Reasons Based on:	KWPP vs GLs % Very to Somewhat Effective
IN/SN/A	Seeing other people taking action	90.1 89.7
A/PN/SN	Friends, relative or acquaintances advising me to take action	89.5 81.8

Based on this analysis, AIS outreach should:

- ✓ **Build beliefs through personal responsibility, social norms, and community responsibility through injunctive norms that target change through positive messages and images**

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Survey Results: Values and Norms

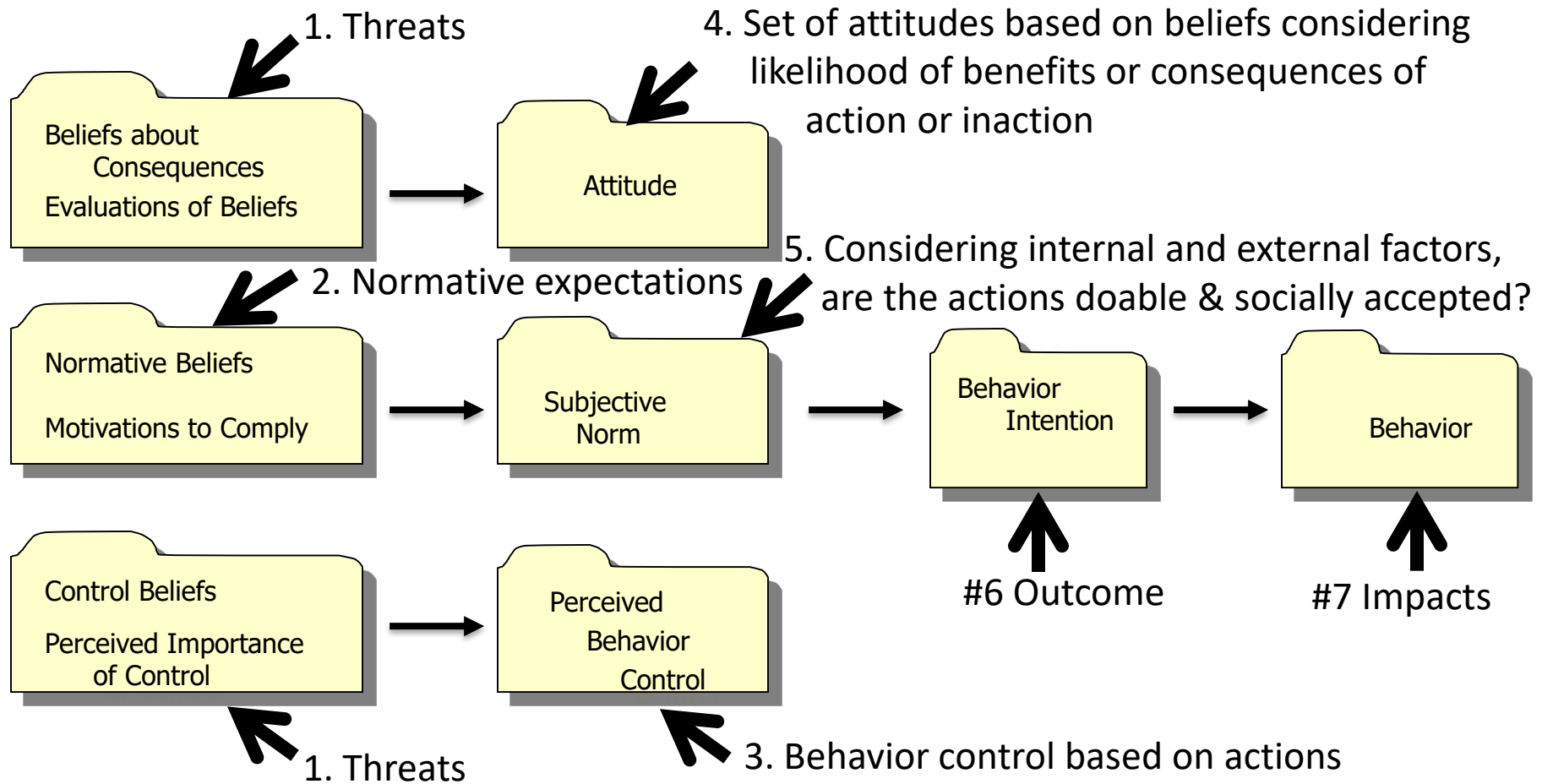


Values	Reasons Based on:	KWPP vs GLs % Very to Somewhat Effective	STOP AQUATIC HITCHHIKERS! MN '00/'94
C/E/SE	Threats of fines that would cost me money	88.4 78.4	57/57
C	Laws or regulation that require actions to prevent transport of AIS	85.6 87.0	61/53
SE/PN/ SN/C	Threat of enforcement by conservation or other law enforcement officers	85.5 78.8	59/48
PN/SN	Embarrassment of being found in violation	65.9 67.2	n/a

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- ✓ Comparing surveys, threats of fines, laws or regulations, & threats of enforcement effectively tapped values and norms increasing by ~25% to ~85% (how high can compliance get?)
- ✓ Since social norm embarrassment is also a strong influence, it should be explored, but with extreme caution

Theory of Planned Behavior



TPB by Icek Ajzen

Visit: www.people.umass.edu/aizen/tpb.html

TBP and Behaviors: Low Apathy & Complacency

Reasons Based:	KWPP vs GLs % Response	Value, Norm, Attitude Issues
I did not transport the boat to another body of water	61.0 66.9	n/a
No boat washing equipment was available	15.3 22.0	n/a
I was not in waters that had AIS	7.2 12.3	Lack of knowledge (always need to take action)
I did not know what I was supposed to do	2.9 6.4	Lack of knowledge/confusion (low for KWPP)
I believed that the current regulations were sufficient	15.3 22.0	Egoistic values
It is inconvenient, I did not have time	15.3 22.0	Egoistic values
I did not realize the importance of AIS	7.2 12.3	Lack of knowledge/confusion (low for KWPP)
Spread of AIS is only a matter of time	15.3 22.0	Egoistic values
I forgot	15.3 22.0	Egoistic values
I was physically unable	15.3 22.0	Egoistic values
AIS are everywhere anyway; my actions won't help	0.5 2.1	Self-efficacy issues Lack of perceived control benefits
I did not want anyone telling me what to do	0.3 0.5	Egoistic valuation Weak normative beliefs
I did not believe that AIS was a problem; I did not care	0.3 0.5	Egoistic valuation Weak normative beliefs
I was willing to pay the fine	0.0 0.3	Egoistic valuation

Pattern:

Lack of perceived control beliefs

Self-efficacy issues

Egoistic values

Weak normative beliefs

AIS Outreach: Bring It Home

- Focus on threats (not fear)
- Promote consistent guidelines: SAH and CD2 (or CD3, Clean Drain Dispose Dry)
- Emphasize mass media (5 of 12) top sources: newspapers, magazines, TV, billboards, radio, signs
- Dig deeper into human behavior:
 - Continue tapping values and norms: altruism, biospheric, social altruism
 - Tap perceived/actual impacts: environment, recreation AND economy
 - Use words that stick: traditions, heritage, legacy, protection
 - Build beliefs by promoting injunctive norms through positive words and images
 - Emphasize: threats, fines and embarrassment (don't be that guy!): tap egoistic, self-enhancement, conservatism



Action image supports injunctive norms

AIS Outreach: Bring It Home

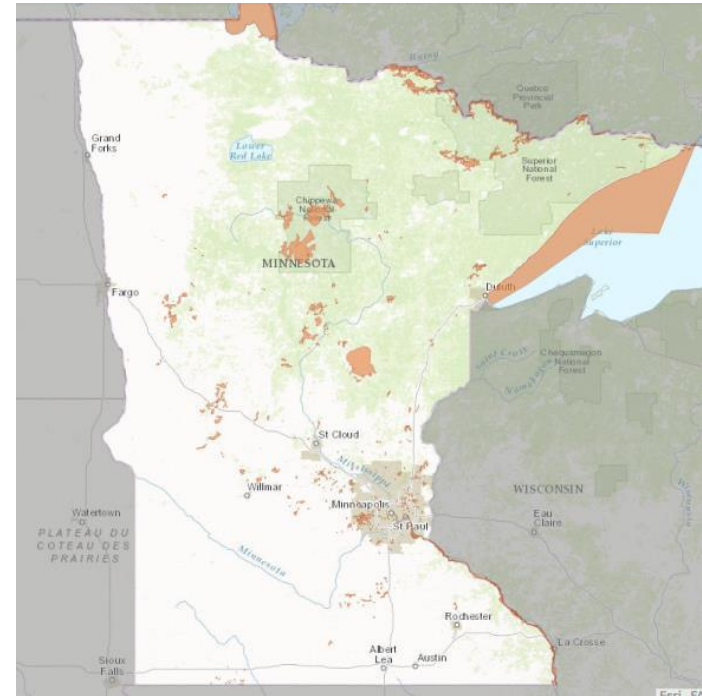
Theory of Planned Behavior:

- Lack of motivation very low based on reasons 1-3% after audience is strategically targeted
 - Promote strategic outreach media to bridge lack of knowledge
- Specifically target messages:
 - Self-efficacy issues
 - Actions make a difference
 - Perceived control beliefs
 - Explain relative risk - that it doesn't take one mistake
 - Actions easy, take little time
 - Actions effective, important
 - Regulations are effective
 - It not just a matter of time
 - Egoistic valuation
 - Actions easy, takes little time
 - Inaction costs \$\$



MN: A Compelling Success Story

- 97% reported actions
- 96% compliance (2016 DNR)
- Only 5% MN waters infested
- 866,000 registered boats
- 1.5 M licensed anglers
- 11,842 lakes
- 3,600 public accesses
- Thousands of private accesses



Thank you! Questions?

Contact: Doug Jensen, djensen1@umn.edu or 218.726.8712